



NORTH BROTHER ISLAND

FINAL REPORT - PART 1

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HISTORIC PRESERVATION
UNIVERSITY OF PENNSYLVANIA

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1. Introduction

1.1 Studio Directive

North Brother Island is an old quarantine island in New York City's East River. The island was abandoned in the late 1960, and despite several proposals for reuse, it has remained uninhabited since that time. During this phase of abandonment several species of colonial wading birds, including the Black-crowned night heron, have begun nesting on the island. Due to the presence of these birds and the dilapidated condition of the structures on the island, access has been prohibited for several decades. However dreams of reusing the island are still abundant.

In 2005, a University of Pennsylvania Historic Preservation studio studied the island to determine if creating access would be an appropriate next phase. After careful consideration they determined that no access should be granted, and the island should be managed as an ecological asset, due to the prevalence of sensitive birds on the island.

The premise of our studio is to reevaluate that decision ten years later. Over the course of the last decade the birds have relocated their nests to the adjacent island, South Brother, although they have continued to use North Brother Island for foraging. The buildings have continued to age and have weathered multiple significant storms, which have accelerated their decline. Additionally, as more people have become aware of the health benefits that stem from access to green space, a variety of community and city entities in the South Bronx have expressed interest in using the island for recreational purposes. The objective for our studio is to reevaluate the 2005 plan within the context of these new circumstances.

1.2 Goal Statement

North Brother Island is a unique historic landscape possessing significant cultural heritage and ecological values, and great potential to yield preservation, education and community benefits. Though managed as a public park, no public access is permitted at this time; a desire for access has been voiced by a variety of local parties, including residents of the South Bronx.

Our studio was challenged with understanding the evolution of the island, re-evaluating and assessing current conditions, and evaluating future potentials of this site through a holistic conservation-planning methodology, incorporating site visits, research, meetings with local stakeholders and experts, and design/exploration of options for safe public access. Our goal is to recommend appropriate short-, medium and long-term solutions, that balance conservation of the valuable resources on the island, with opportunities for access, community stewardship, and interpretation.

1.3 Site Description

North Brother Island is 22 acres and is located just south of Hunt's Point in the South Bronx. One of several islands in the waterways surrounding New York City, this half-acre-wide island is just one of the many pieces of land which make the larger archipelago of the City. In recent years, many of these formerly underutilized islands have been reimagined and these islands are important assets not only for the city but also for New York Harbor ecological system.

The New York Harbor Estuary is a particularly rich ecosystem that is inhabited by a variety of colonial wading birds. Maintaining viable habitats along the migratory paths of these birds is essential to their survival. North Brother and South Brother are two important pieces of habitat that help sustain the bird population. The New York City Department of Parks and Recreation acquired North Brother Island in 2001 and at that time it was decided the land would be managed as a "forever wild" space and public access would be banned.

According to the Harbor Heron monitoring reports that are produced by New York Audubon, the herons have not been nesting on the North Brother since 2008. However, since that time nesting rates on South Brother and other islands in NYC have increased. Although it seems that the birds have moved on from NBI for the time being, it is possible that they will return in the future. Therefore it is important to maintain the Island as a viable habitat. With that in mind, the New York City Department of Parks and Recreation has been carrying out a "reforestation" campaign over the last nine years. This campaign is strategically removing non-native, invasive plants and replanting native species in key locations to create a more hospitable nesting environment.

Decisions about access are complicated by the fact that ferry service has ceased, and no transportation to the island exists. Public access could negatively impact the colonial wading birds, which are sensitive to disturbances during the nesting season. The structural instability of the buildings poses a safety risk to those who visit the island, however it is evident that many "urban explorers" have illegally gained access to the island to explore the buildings. This visitation may have contributed to the relocation of the birds.

Additionally, in recent years the Island has received a wide range of media attention, which has increased interest. The allure of North Brother Island is not going to fade anytime soon, so it is essential that a comprehensive management plan be developed so access to the island and all the associated complexities can be actively managed and are not simply left to chance.

2. History

2.1 History of North and South Brother Island

One of many islands in New York City's East River, North Brother Island has had a rich and varied history. Its isolation has consistently played a major factor in how this small piece of land has been handled. Today, it exists as a Heron preserve, closed to public access and overrun by invasive plant species. Yet for 150 years, it was a well-maintained and hospitable place that served the public of New York City. Its companion, aptly named South Brother Island, has had a far more quiet history, privately owned and considerably less developed.

Captain Adriaen Block, a Dutch settler, first discovered North and South Brother Islands sometime between 1611 and 1614 and claimed it for the Dutch West India Company.¹ He named the islands de Gessellen, translating roughly to "brethren," which later was interpreted as "brothers."² They were granted to Joseph Graham in 1695 and though they were officially part of Queens, the islands would remain undeveloped for almost two centuries.³ Morrisania, a town in the Bronx, purchased North Brother Island in 1871 and South Brother remained a part of Queens until 1964.⁴ These divergent paths as well as the size of the islands were key to the strikingly different trajectories of the use and development of the two islands.

South Brother Island has been primarily a private residence. Purchased in 1894 by the wealthy brewer and Yankees owner Colonel Jacob Ruppert, the island became his summer retreat until 1907.⁵ The house he built burned down in 1909 and the land remained untouched until 1944 when Ruppert's estate sold the property.⁶ John Gerosa, president of Metropolitan Roofing Supplies, purchased the island and revealed plans to build a resort for his employees.⁷ No building ever occurred and in 1958 he too sold the island.⁸ It was eventually purchased by Hampton Scows out of Long Island and again sat vacant for three decades.⁹ In 1964, the borough boundary was changed to include South Brother Island in the Bronx and in 2007 the City of New York purchased the South

¹ Sharon Seitz and Stuart Miller, *The other islands of New York City: a Historical Companion*, Woodstock, VT, Countryman Press, 1996, 190.

² Robert Sullivan. "Wayfarers." *North Brother; the Last Unknown Place in New York City*. New York, NY.: Fordham University Press, 2014, 2.

³ Seitz and Miller, 190.

⁴ Ibid., 190.

⁵ Ibid., 190.

⁶ Ibid., 190.

⁷ Ibid., 190.

⁸ Ibid., 190.

⁹ Ibid., 191.

Brother Island for \$2 million dollars and placed it under the management of NYCDPR; reuniting the pair once again.¹⁰

The earliest evidence of use on North Brother Island was a small quarantine hospital established by The Sisters of Charity in the mid-nineteenth century.¹¹ Due to the social stigmas of immigration, illness and the rampant spread of “communicable” diseases, North Brother was perceived as the perfect location for the sick because it was isolated from but still in close proximity to the city. When the island was transferred to the jurisdiction of Manhattan in 1881, the Department of Health and Hospitals immediately began surveying in order to build a larger facility.¹² This was a concerted effort to replace Riverside Hospital, then located on nearby Blackwell’s (now Roosevelt) Island.¹³ Charles C. Haight, a prominent New York architect, designed the new Riverside Hospital, as well as the other structures in the initial hospital plan.¹⁴ The original plan included a two-story brick hospital for 80 patients and three additional “pavilions” or frame structures with forty beds each to deal with patient overflow.¹⁵ It was clear almost immediately that these few structures would not be sufficient. The speed of industrialization and urban growth along with the influx of immigrants into America required the construction of five additional pavilions in 1886 along with two buildings specifically dedicated to the care of small pox victims by 1892.¹⁶ Later epidemics like an outbreak of typhus in 1893 would require additional, more portable accommodations.¹⁷

It was during this peak in hospital occupancy, that North Brother Island was the site of one of the greatest tragedies in New York City’s history. In 1904, the steamship General Slocum sank in flames just off the shores of the island taking the lives of over 1,000 German immigrants, mainly women and children from the Lower East-Side, who were out on a recreational day trip. Using ladders from island construction sites, hospital staff members were able to rescue over 250 people from the water, though their efforts could not prevent the largest loss of life in New York City previous to September 11th, 2001.¹⁸

¹⁰ Dorian Block, “City buys South Brother Island on East River for bird refuge,” *New York Daily News*, November 27, 2007, accessed September 22, 2015, <http://www.nydailynews.com/new-york/bronx/city-buys-south-brother-island-east-river-bird-refuge-article-1.258460>.

¹¹ Historic Preservation Planning Studio 2005. “North Brother Island; Balancing Ecology and Cultural Heritage.” Philadelphia, P.A.: New York City Department of Parks and Recreation and University of Pennsylvania Historic Preservation Program, 2005.

¹² Randall Mason. “Wildness, Disease, and the Changing Civic Landscape: North Brother Island’s History.” *North Brother; the Last Unknown Place in New York City*. New York, N.Y.: Fordham University Press, 2014, 14.

¹³ *Ibid.*, 16.

¹⁴ Historic Preservation Planning Studio, 19.

¹⁵ Seitz and Miller, 192.

¹⁶ *Ibid.*, 192.

¹⁷ *Ibid.*, 192.

¹⁸ Historic Preservation Planning Studio, 21.

After the initial period of construction, the island was steadily developed throughout the early 20th century, with agencies rehabilitating existing structures to fit new uses as well as periods of demolition and reconstruction based on changing needs.

Each new epidemic caused changes to the built fabric of North Brother but none more than the outbreaks of tuberculosis and polio.¹⁹ The extreme and deadly rate of these two diseases required all quarantine centers to accommodate more patients than most had space for. As a solution, a tuberculosis hospital, costing \$1.2 million dollars, was constructed on North Brother Island.²⁰ The outbreak of World War II stalled the construction of the 150-bed facility but it was finally completed in 1943, just before the island closed down.²¹ Subsequently the state-of-the-art Tuberculosis Pavilion never housed tuberculosis patients. At the time of the Hospital's closure in 1944, North Brother had 34 buildings. The large and new Tuberculosis Pavilion was ready for use but most of the buildings were in decaying and far less stable condition.²²

The most notable, and longest term resident was the Irish immigrant known as "Typhoid Mary", whom was an asymptomatic carrier of Typhoid working in New York City as a private cook. After several Typhoid outbreaks were linked to her, Mallon was arrested and quarantined. Mallon's first quarantine lasted three years until she was released under the order that she never cook for another person again. Five years later Mallon was found working as a cook under a fake name in a New York City maternity hospital. After her arrival, 25 patients came down with Typhoid, two of which passed away. This led to her second arrest in which Mallon was forcefully exiled on North Brother until she passed away in 1938. She lived out her days in a private cottage next to the church that had a perfect view of New York City.²³

By 1944 the hospital ceased operation as administrators found it increasingly difficult to retain staff members who could not be convinced to live on the island or commute regularly by ferry. After sitting vacant for two years, North Brother Island was commissioned by the State of New York to serve as housing for WWII veterans and their families. Like many other cities across the nation, New York City struggled to house the great number of returning soldiers especially for those taking advantage of the G.I. Bill since many universities lacked sufficient dormitory space. The City invested over one million dollars to rehabilitate North Brother and spent ten thousand dollars repairing the ferry gantry to make the island habitable for the students and their families. The male dormitory on the island was refurbished and became the "Island Nursery School" for the children

¹⁹ Ibid., 192.

²⁰ Ibid., 193.

²¹ Ibid., 193.

²² Ibid., 193.

²³ Ibid., 29.

living on the island.²⁴ North Brother housed students from Cornell, Columbia, NYU, Julliard, Fordham and several others universities, reaching its peak occupancy of 1,500 residents in the late 1940s.²⁵ Those who lived there remember it fondly, however the community was short lived as the state's lease only lasted until 1951.

In 1951 the island was taken over by New York City's Department of Health and Hospitals again in order to repurpose the campus as a rehabilitation facility for teenagers. Officially open by the first of January 1952, several buildings were renovated and reused to accommodate the drug rehabilitation efforts, including the Tuberculosis Pavilion, male dormitory, P.S. 619 and the church.²⁶ Teens entered of their own will and submitted to detoxification, psychiatric counseling, physical rehabilitation and a regimen of school, work, and recreational activities.²⁷ The average stay was three to five months, but recidivism rates were extremely high. The program lacked aid to transition patients back to the ghettos they came from and usually whatever progress was made on the island was lost when they returned home. It was said that only 40 teens remained clean out of 2,505 total that were treated. This failure could also have been from the reportedly widespread lack of seriousness about arresting their drug habits or the drug use and general misbehavior that prevailed on the island. Because the program only used a small portion of the island's buildings there were a number of secluded spaces for the kids to disappear to. The lack of success as well as the high cost of treatment led to the closure of facilities by 1963. Unlike the two-year vacancy from 1944-1946 when maintenance on the grounds continued, this time all inhabitants vacated the island completely.

North Brother Island was then categorized as surplus property when none of the city departments could identify a specific use for the buildings or the grounds. It was placed under the jurisdiction of the Bureau of Property Management in New York City's Department of Real Estate. Amenities such as ferry service, electricity and phone lines were cut off immediately after the rehabilitation center closed and for fourteen years nothing was done to preserve the island's buildings or grounds.²⁸ Unrestrained vandalism led to the removal of all the copper piping, porcelain fixtures and other elements of value leaving the buildings more vulnerable to deterioration. The island declined quickly and by 1969, a memo to the Bureau from the Fire Department stated that all sixteen extant buildings were in hazardous condition. The island was listed for sale by the Department of Real Estate in 1970 in order to raise money for the city. This effort to sell was eventually thwarted by the

²⁴ Molly McDonald Thesis

²⁵ Winthrop, 33.

²⁶ *Ibid.*, 35.

²⁷ *Ibid.*, 36.

²⁸ *Ibid.*, 41.

Board of Estimate, spearheaded by Bronx Borough President Abrams.²⁹

Throughout the 1970s, a flurry of potential reuse ideas were proposed for North Brother Island including a waste disposal site, amusement park, drug treatment center, casino, salt storage, power plant and others. None of these schemes were implemented because any reuse plan required a great deal of money to rehabilitate and the island was made less appealing because of the astounding noise pollution from nearby LaGuardia airport.³⁰ In addition, the construction of a bridge to Riker's Island from Queens replaced the ferry service that catered to all of the islands in the area, effectively cutting off North Brother Island from public access. The air quality declined, the waters of the East River became heavily polluted and invasive species such as Norway Maple, mile-a-minute vine and kudzu overtook the once manicured island. Toward the late 1970s, the decreasing human activity and the increase in plant growth made North Brother Island a prime location for bird for nesting, mating and hunting. At this time predominately herons and other colonial wading birds took over North and South Brother Islands.

In 1987, the New York City Audubon Society and the NYC Department of Environmental Conservation performed nesting surveys as part of a broader campaign to investigate bird behavior in the New York Harbor. This study found the island had become heavily populated by several different species of colonial wading birds. The marshes, overgrowth and lack of human disturbance created an ideal nesting ground for shorebirds, including the colonization of both North and South Brother Islands by the Black-Crowned Night Heron.³¹

The New York Department of Parks and Recreation took over stewardship of the Island in 2001 and have attempted to foster a welcoming environment for the birds as well as implement reforestation efforts. In 2003, New York City's Harbor Herons Project started a monitoring program to research the herons' movement patterns from nesting to foraging sites on islands throughout New York City.³² By 2005, the Audubon's monitoring report stated the bird's presence on North Brother had decreased 15% from the previous year and by 2008, birds had reportedly stopped nesting on North Brother. Beginning in 2012 the NYCDPR began their reforestation effort to eliminate invasive species and repopulate the island with native plantings. The Department has completed the Design and Procurement phases and is now in the midst of the final Construction phase. In addition to reforestation, NYCDPR has been managing a natural resources project that includes securing several hazardous areas post-Hurricane Sandy, conducting extensive storm debris cleanup, and

²⁹ Ibid., 42.

³⁰ Winthrop, 48.

³¹ "Forever Wild: North Brother/South Brother Harbor Herons Preserve." NYC Parks-Official Website of the New York City Department of Parks & Recreation. New York, NY.: The City of New York. Web. 15 Sept. 2015.

³² Historic Preservation Planning Studio p. 16

removing a potentially dangerous leaning trees.³³

Many residents of New York City, especially those in the Bronx are interested in making use of North Brother Island and preserving its multifaceted history. However due to the delicate ecological system that has evolved over that last forty years, NYCDPR has deemed the island a Harbor Heron Preserve, as well as categorizing the island as a “Forever Wild” site, effectively banning public access.³⁴ Only a few Parks employees are granted access to carry out department initiatives during the winter, outside of the bird’s nesting season.

2.2 History of Transportation to North Brother Island

The nature of quarantine and the operations of Riverside Hospital on North Brother depended, quite profoundly, on the isolation of the island. Having people infected with highly contagious diseases in close proximity to heavily populated areas would defeat the purpose of quarantine. While this choice followed the trends of contemporary medical treatment, the use of an island created serious problems with the transportation of materials, medical supplies and people to and from the island on a regular basis.

Throughout the entire use of the island, the steam ferry was the main source of transportation for the public and staff, though in the early years of Riverside Hospital, it was more common for the staff to live on the island.³⁵ As the years passed, the desire of the staff to live with their patients waned and for many, it became a point of frustration, so much so that it created a substantial amount of turnover.

For the majority of its history, North Brother Island was accessible through a privately operated ferry, run by one of the many transportation companies during the popularity of ferry transit.

In 1924, the City took over the property of the New York and College Point Ferry Company, who had closed in 1919 due to a decrease in the use of ferries for more modern methods of transportation.³⁶ In its heyday, the company had built a significant amount of infrastructure to support their transport service, and it was this platform that the City used to begin a ferry service for the institutions on the islands in the East River.³⁷ The ferry terminal at 134th Street in the Port Morris neighborhood of

³³ “Know Before You Go.” *North Brother Island*. NYC Parks-Official Website of the New York City Department of Parks & Recreation. New York, NY.: The City of New York. Web. 15 Sept. 2015 <<http://www.nycgovparks.org/parks/north-brother-island/map>>.

³⁴ “Forever Wild: North Brother/South Brother Harbor Herons Preserve.”

³⁵ Winthrop, 26.

³⁶ “Port Morris Ferry Bridges,” National Register of Historic Places Registration Form, completed by Jinny Kahnduja, Columbia University, May 2013, <http://www.nps.gov/nr/feature/places/pdfs/13001150.pdf>, 9.

³⁷ “Port Morris Ferry Bridges,” 9.

the South Bronx became the major launch point for the Williamsburg, Greenwich Village and Mott Haven, the first diesel-powered ferries owned by the city.³⁸

After Riverside Hospital closed and the island was converted to surplus WW2 veteran housing, the ferry facilities at 134th Street were determined as inadequate and were upgraded to accommodate more frequent use.³⁹ Ferry service continued through 1963 when North Brother Island's final iteration, the drug rehabilitation facility, closed. At this point, transportation to the island was no longer required and the construction of a bridge between Rikers Island and Queens removed any real need to have regular transportation from the Bronx to the islands of the East River. Today, island access requires the use of a NYC Parks or privately owned boat.

2.3 History of Coast Guard Ownership

While the majority of North Brother Island's acreage served New York City as a place of quarantine, the southern tip, accounting for about two acres, served as a lighthouse post for the United States Coast Guard. Both North and South Brother are located at the northern entrance to the dangerous stretch of the East River known as Hell's Gate, between Wards Island and Astoria, Queens. As the shipwreck count increased in the early nineteenth century, the New York Superintendent of Lights made this area his top priority the installation of infrastructure vital to safe ship passage. To this end, Congress approved \$5,000 in 1829 for the construction of a light "on or near one of the islands called Brothers."⁴⁰

North Brother was ultimately selected as the ideal site but the owner at the time, Edward Ackerson, refused to sell.⁴¹ The U.S. Government attempted to negotiate a sale for three years but when those attempts failed, it was decided the New York legislature should condemn the property. Two more years passed with no action and the earmarked funds were returned. Construction of a lighthouse would not be considered again until 1848 when \$10,000 was promised if title to the necessary land on North Brother Island could be secured.⁴² Again Ackerson proved impenetrable asking \$5,000 for only two acres and so the funds were used for other lighthouse maintenance needs.

Finally in 1868, thirty-nine years after it was first considered, a lighthouse was constructed on North Brother Island. The State of New York assisted in the purchase of the necessary land and \$16,000

³⁸ *Ibid.*, 9.

³⁹ *Ibid.*, 10.

⁴⁰ "North Brother Island, NY," Lighthouse Friends, accessed October 10, 2015, <http://www.lighthousefriends.com/light.asp?ID=851>.

⁴¹ *Ibid.*

⁴² *Ibid.*

was set aside for the construction of a lighthouse and two-story dwelling.⁴³ The final design, with an integrated tower and mansard roof, was very similar to other contemporary structures built in Vermont, Rhode Island and New York. The two-story keeper's dwelling had a kitchen, pantry, dining room, sitting room and oil room on the main floor and four bedrooms upstairs.⁴⁴ The tower, octagonal in shape, was integrated into the front façade and was fifty feet tall.

The first beacon was a sixth-order lens, first utilized in November of 1869.⁴⁵ A fog bell was added in 1889 and the lens was exchanged for a fifth-order. Ten years later, the lens was replaced again to increase the intensity of the light. A small brick oil house was completed in 1901.⁴⁶

While the small tip of the island was being developed for maritime use, the majority of North Brother was being transformed into a quarantine hospital. In 1883, a fence was constructed to separate the two distinct spaces and the son of one of the last lighthouse keepers remembers being scolded by the doctors for crossing the barrier.⁴⁷

As is the case with many old lighthouses, North Brother Island's light was decommissioned in 1953 and replaced with an automatic light on top of the metal fog bell tower.⁴⁸ Unlike many other sites, however, the lantern room and very top of the tower were removed and the building was left to deteriorate.⁴⁹ Following more than half a century of neglect, the structure finally collapsed and today, all that remains of the two-story building is a small corner of the first floor, the splintered white clapboards barely visible behind overgrown plants and a massive chain-link fence. The automated light would eventually be moved to a buoy in the waters just off shore. The only preserved piece of this history is the fog bell, which was moved to the New York City Police Department Harbor Unit at College Point as a memorial to those who died in the line of duty.⁵⁰

⁴³ "North Brother Island, NY," Lighthouse Friends.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Jeremy D'Entremont, "Memories of North Brother Island: 'It Was A Nice Life,'" Lighthouse Digest, accessed October 10, 2015, <http://www.lighthousedigest.com/digest/StoryPage.cfm?StoryKey=1941>.

⁴⁸ "North Brother Island, NY."

⁴⁹ Ibid.

⁵⁰ Jeremy D'Entremont, "Memories of North Brother Island."

3. Enabling Environment

3.1 Stakeholders

In addition to understanding the history of North Brother Island, it was important to identify and understand the perspectives of stakeholders who have current or potential connections to the Island and the resources it has to offer. Engaging with these individuals or groups, allows for the documentation of a variety of values and the comparison of different groups. Asking stakeholders for their perspectives offers insight into the way the current management system serves the values they see in the Island and identifies other areas these needs are not necessarily being met.

These discussions moved beyond simply understanding and communicating with the owner and management entity, New York City Department of Parks and Recreation, to groups with more specific interests invested in aspects of the island including the birds, i.e. the citizens of the South Bronx and those with knowledge of the policies which would affect any work proposed. It should be noted that we as the studio group along with some of the other experts who will work with Penn Praxis as the project moves forward represented the interests of historic preservation and cultural history. This was, for the most part, a decision because of the highly political nature of preservation in New York City and not because of a lack of understanding or knowledge of who those potential stakeholders are or could be.

Identifying Stakeholders

By identifying and communicating with stakeholders who have connections with North Brother Island, we have gradually established a multifaceted understanding of current management issues existing on the island. Being more receptive to diverse interests and opinions, we had a far more comprehensive understanding of different perspectives and the inherent values of the island. This will enable the identification of a greater amount of values in order to build a holistic plan that can speak to the values of the current stakeholders.

Contacted Stakeholders:

- New York City Department of Parks and Recreation (NYCDPR)
 - o Kristy King, Head of Natural Resource Group/Director of Forest Restoration
 - o John Krawchuk, Director of Historic Preservation/Cultural Resources contact
- New York City Audubon (NYC Audubon)
 - o Susan Elbin, Director of Conservation and Science at NYC Audubon

- Andrew J. Bernick, Survey Leader of NYC Audubon's Harbor Herons surveys (1999-2008)
- Michael Marrella, Director of Waterfront and Open Space Planning (WRP), Department of City Planning City of New York (NYCP)
- The Point CDC
 - Maria Torres, President and Chief Operating Officer of the Point CDC
 - Paul Lipson, Founder of the Point CDC/President of Barretto Bay Strategies
- Adam Green, Executive Director, Rocking the Boat
- Amy Freitag, Executive Director, J.M. Kaplan Fund
- Rob Pirani, Hudson River Foundation/Forever Wild Program
- Penn Praxis' Team
 - Nick Pevzner
 - Max Piana
 - Ellen Neises, Hunt's Point Lifelines
 - Justin Spivey, Engineer
 - Andrew Fearon, Conservator

The initial list of stakeholders was derived from the 2005 Studio report and research done on the current enabling environment. With each successive interview, the final question posed was: "Whom should we speak with next?" This allowed a far larger list than research alone could produce and offered a more diverse perspective on the Island, as it exists today. The following is a list of potential stakeholders we predict may be well positioned to take advantage of what the Island has to offer in the future. By identifying potential stakeholders the preservation plan can be designed in a forward-thinking manner and can be focused on benefitting a greater range of people.

Ecological Group:

- New Yorkers for Parks
- National Oceanic and Atmospheric Administration (NOAA)
- Wildlife Conservation Society
- Bronx Council for Environmental Quality
- New York Restoration Project
- US Coast Guard

Heritage Group:

- The Urban Explorers Network
- Boating/Kayak Club
- New York Historical Society

Social Group:

- New York City Economic Development Corporation (NYCEDC)
- Sustainable South Bronx
- Bronx River Alliance

Analysis of Stakeholder Conversations

The values for North Brother Island were constructed from an understanding of the history of the Island, the current management plan and the values identified by the stakeholders interviewed and identified. The following information outlines the values as understood by stakeholder interviews. Conversations with various groups and individuals revealed three clear separate overarching values: Heritage, Ecological, and Social. While numerous groups and individuals were interviewed, the following is a compilation of our synthesized understanding of North Brother from the collective responses.

Heritage Values

NBI is part of a larger story of the quarantine islands of New York City. Stakeholders who have been to the Island speak to the value they find in the buildings and the experiential quality of the buildings marrying with the landscape. It also offers possible interpretive opportunities relating to what preservation means, how we can protect what we see as valuable and how we think about urban parks. The memories of people who lived on the Island in the 1940s and simply the concept of life on an island arouse people's memories and interests. Stakeholders have documented the many signs of illegal access and numerous social media accounts have images of people and dogs in and around the most of the prominent buildings and landscape features. It is clear the quality of North Brother Island will diminish without the structures. Further investigation of the structural construction is necessary in order to make decisions about stabilization or re-use.

Current management issues are reflected in the deterioration of the built fabric, which is in an advanced state of decay. Many significant buildings like the Male Dorm and the TB Pavilion are rapidly deteriorating and action or intervention is needed in the near future to protect what current-

ly exists. Major changes, like complete demolition would significantly alter the qualities stakeholders remember most. At the same time, illegal access presents complications of safety and brings up issues of liability for NYC Parks. Trespassers also have the potential to cause increased damage to the buildings. These many factors require a concise and easily implemented plan for the material heritage on the Island; one that includes building monitoring and action to arrest the deterioration of the buildings.

Ecological Values

As understood in the Heritage values portion, the current ecological construction of the Island lends a great deal to the experiential quality valued by many stakeholders. For others, however, the health of the reforestation areas and the birds are most important. The relevant stakeholders are concerned with the potential increase of visitation to North Brother and the impact it could have on the flora and fauna. At the same time, other groups have expressed interest in using the Island as an outdoor classroom given the layers of vegetation and the birds, which offer natural experiences not available in a large metropolitan city. Given the amount of remediation infrastructure that has been built in the Bronx, it makes sense the community should see the benefit. North Brother Island should to be highlighted as a public health asset because it is capable of providing a rare park experience in New York City.

Social Values

Although the wild and abandoned qualities make North Brother Island a remarkable urban forest in the middle of a large metropolitan city, its unique quality would be the largest benefit to the nearest community - the South Bronx, which is one of the poorest congressional districts in the country and lacks significant greenspace. Stakeholders are most interested in the way NBI can engage children in long-term education, enhancing the experience of living in the City with a green space significantly closer than those accessible to them today. In addition, interest has been expressed in making connections between adults in Hunt's Point and employment opportunities.

Interpretation should be geared toward those who live in the South Bronx in order to expand their perspective of their community's history in addition to connecting back to the larger narratives of New York City. The educational and recreational benefits to this community are also significant. One way to build value in both an ecological and social way would be to engage individuals in the South Bronx in a stewardship program to build their investment and personal commitment to North Brother.

Analysis of Stakeholders' Influence

We aim to build our strategies of values-based management depending on relevant stakeholders' influence on identified values. In order to expand the scope of engaging stakeholders, we placed individuals on two spectrums: interest and influence. The resulting placement helps to frame the opinions shared or the possible roles these organizations or individuals could play in the future of North Brother Island.

In the top right quadrant of the Stakeholder Diagram are the organizations with high influence and high interest. These groups should be managed as key-players who are involved in decision-making and governance decisions. Strong connection and communication with these stakeholders will result in the most successful management solution and implementation.

In the top left quadrant are those with high influence with low interest. We should keep these parties satisfied and meet the needs they have because they are important in negotiating and are useful for decision and opinion formulation. It is necessary to engage and consult them on key areas of interest and eventually, it would be ideal to increase their level of interest to become key players.

The bottom right quadrant has the groups with low influence with high interest. This group of stakeholders should be kept informed of our progress and we should consider them as organizations or individuals to empower and involve. We could consult them to secure their continued interest in the project and built their capacity as potential supporters or ambassadors for work proposed on the Island.

In the bottom left quadrant are those with low influence with low interest. Even though they are the lowest priority, we should monitor them with general communication. Hopefully by following up and requesting feedback, we can grow their interest in North Brother Island and expand the values they see in supporting the management of the Island.

3.2 Policies and Plans

As a site of abundance in both socio-cultural and ecological resources, North Brother Island (NBI) is regulated in use on all three levels of government: federal, regional, and local. The three levels of policies and plans aim, mainly, to protect the island's ecological and social values. In its current state of management by the New York City Department of Parks and Recreation, the island's natural resources are given precedence and its cultural resources are neither explicitly nor directly regulated.

Ecological Policies and Plans

NBI is identified as a part of an estuary of national significance and is under the federal legislation of the *Estuaries and Clean Waters Act* (2000). This act aims to improve the water quality as well as to protect and conserve the wildlife habitats within the region. The *Estuaries and Clean Waters Act* authorizes the National Estuaries Program (NEP) that allows each of the designated areas to develop its own management plan. NBI lies within the boundaries of the New York - New Jersey Harbor Estuary Program (HEP) (see Fig. 1) and is under the jurisdiction of the cooperative management created by the two states. While the NEP is a non-regulatory, stake-holder driven program, it is also result-oriented and aims to “protect the coastal environment, sustain coastal economies, and improve [...] quality of life.”¹ The NY-NJ HEP published its final Comprehensive Conservation and Management Plan in 1996 and a new Action Plan for 2011-2015. While the program itself lacks regulatory power, it employs a combination of the *Clean Waters Act* provisions as well as various federal and state level EPA regulations. The authorization for the NEP expired in 2010 and a bill, Bill S. 1523, introduced by Senator Sheldon Whitehouse of Rhode Island, is currently in motion to reauthorize the program. It has just passed the Senate with unanimous consent on August 5, 2015 and awaits action by the House of Representatives.

In addition to the NEP, NBI is also subject to a tri-level policy/management plan as it is considered a part of the Federal Coastal Zone. The *Federal Coastal Zone Management Act* is a legislation that was implemented in 1972 and amended in 2005 to recognize the “importance of meeting the challenge of continued growth in the coastal zone” and is administered by the National Oceanic and Atmospheric Administration (NOAA).² Its purpose is to balance the increasing economic development with necessary environmental conservation throughout the coastal zones. While

¹ “Legislation,” Association of National Estuary Programs, accessed September 22, 2015, <http://nationalestuarines.org/legislation.html>.

² “Coastal Zone Management Act,” Office of Coastal Management NOAA, accessed September 22, 2015, <http://coast.noaa.gov/czm/act/>.

this legislation gives primacy to state-level decision-making, it also requires any proposed federal projects to go through the Federal Consistency Provisions, to be check for consistency with the approved state management program. In the case of New York, the state level legislation is the *New York State Waterfront Revitalization of Coastal Areas and Inland Waterways Act* of 1981. It consists of 44 state coastal policies and designates the Department of State as the administrator of New York's Comprehensive Management Plan. It authorizes the creation of optional Local Waterfront Revitalization Programs (LWRP), so long as such programs are found consistent with the state's 44 coastal policies. As a result, New York City has created the Waterfront Revitalization Program (NYC WRP), implemented in 1982, updated in 2002, and revised, most recently, in 2013. Its primary aim is to maximize the benefits derived from the economic development, environmental conservation, and public use of the waterfront areas while minimizing conflicts among any of the aforementioned objectives. It identifies NBI as a Special Natural Waterfront Area and a Significant Coastal Fish and Wildlife Habitat (See Fig. 2). To regulate such ecological resources, the NYC WRP introduces its own set of 10 local-level policies which have since been incorporated into the state CMP. The 56-policy program is administered by the Department of City Planning and establishes the City Planning Commission as the acting City Coastal Commission. Any local actions within these areas are subject to all three levels of consistency review.

Furthermore, NBI is under the ownership of the New York City Department of Parks and Recreation and has been designated as part of the Forever Wild Program since the NYCDPR's acquisition of the waterfront area in 2001. This land acquisition was a part of Bloomberg's 15 year initiative to acquire waterfront areas under city ownership and NBI, now under Parks ownership, falls under Bloomberg's initiative to increase environmental resilience to climate change. In accordance with the efforts toward environmental resilience, Parks has set the "Parks Tree Preservation Protocols" in which the NYCDPR claims jurisdiction over "all trees growing in the public right-of-way—including street and parkway trees—as well as those in parks, playgrounds and greenstreets."³ The protocol sets forth the "best practices for protecting trees impacted by construction projects in the urban environment," and requires the authorization of the Parks Commissioner prior to any construction work that might impact a tree.⁴ It also explains the restitution process and requirements for any unavoidable tree removal, referring the work party to the Tree Valuation Protocol.⁵ While these protocols do not affect the island in its current state, as NBI is a site overabundant in trees, future projects in any form will require the aforementioned authorization by the commissioner and involve

³ Parks Tree Preservation Protocols, NYC Parks and Recreation, pg. 2, accessed November 22, 2015, <https://www.nycgov-parks.org/pagefiles/52/Preservation-of-Trees-During-Construction-FINAL-4-09.pdf>.

⁴ Ibid.

⁵ *New York City Tree Valuation Protocol*, NYC Parks and Recreation, accessed November 22, 2015, <https://www.nycgov-parks.org/pagefiles/52/NYC-Tree-Valuation-2010.pdf>.

the tree restitution process. Additionally, as a part of the Parks system, the island is subject to all Rules and Regulations of the NYCDPR.

NBI is also considered a “Forever Wild” site, one of 51 designated under the NYCDPR Forever Wild Program. The program was created to “protect and preserve the most ecologically valuable lands within the five boroughs” of New York City.⁶ It is funded by the New York State Environmental Protection Fund, under Title XI and managed by Parks. Unlike the state-level Forever Wild program, the city-level program is intradepartmental and highly subjective in its designation of sites—it has no standardized criteria for designation.⁷ It has yet to establish official program policies and regulations and its sites are managed on a case-by-case basis according to the program’s mission statement. While most of the 51 designated sites in NYC offer public access and recreational use, Parks has deemed NBI a Forever Wild site as a nesting place for the Black-Crowned Night Herons, a protected and highly sensitive species. The island thus offers no access at present.

Social Policies and Plans

The tri-level waterfront revitalization program set up by the *Federal Coastal Zone Act*, the *New York State Waterfront Revitalization of Coastal Areas and Inland Waterways Act*, and the Waterfront Revitalization Program, impacts the social values of NBI in addition to its unique ecological values in that the program strives to balance the social and economic development in the area with environmental protection and conservation. While the federal and state level policies give precedence to providing provisions for the ecological values of the areas, the municipal level WRP more specifically addresses the social values in addition to the former. It speaks directly to maritime and industrial developments, public use of the waterways, public access, scenic resources, as well as historic and cultural resources. In fact, the WRP Management Plan is the only one of a working list of relevant policies and plans for NBI that specifically mentions the historic and cultural, calling for such resources, including archaeological resources and artifacts, to be preserved and protected so that it might enhance the significant assets of New York City. Though the WRP CMP does not explicitly address NBI in writing beyond its maps, any proposal for action on the island requires WRP review, as it lies within the boundaries of the WRP and is land entirely controlled by public funds. Outside the review process, however, interaction between the Department of City Planning (WRP) and the Department of Parks and Recreation in regards to the island is limited to hypothetical instances in which Parks might put NBI up for concession for

⁶ “Forever Wild: Nature in New York City,” NYC Parks and Recreation, accessed November 22, 2015, <http://www.nycgov-parks.org/greening/nature-preserves>.

⁷ Personal conversation with Tim Wenskus, NYCDPR NRG Forester, November 13, 2015.

private use, development, or business, in which case the WRP review is required and the project is held up to the standards of all building and FEMA regulations.⁸

The aforementioned NYS Environmental Protection Fund has, under Title XI, has also funded the “Vision 2020: New York City Comprehensive Waterfront Plan” in 2011. As a waterfront revitalization plan, “Vision 2020” offers strategies on restoring the natural waterfront, improving water quality, and increasing climate resilience—the ecological factors—but also speaks to expanding public access, enlivening the waterfront areas, and supporting the working waterfront. North and South Brother Island are specifically mentioned under this Management Plan to pursue funding to develop an island-specific comprehensive plan to “integrate cultural, historical, and natural resource management on both islands.”⁹ Unfortunately, this island-specific plan has been initiated and taken on by the NYCDPR as a part of its forest restoration efforts and presently lacks the “integration of cultural and historical” resources into the management plan—it has taken form of a natural resource management plan rather than a comprehensive management plan.¹⁰

In addition to the relevant management and action plans, NBI is subject to the most basic New York City zoning codes. As a part of the Borough of the Bronx, the island is under the jurisdiction of the NYC Department of City Planning and the Bronx City Planning Department in particular. NBI has two zones within its 22 acres: the majority of the area surrounding the historic institutional structures is classified a Park Zone while the rest is zoned a C8-2, a heavy commercial zone (See Fig. 3). The DCP lists areas zoned to be parks as being exempt from many zoning codes. However, safety and liability take precedence over these zoning districts and thus all buildings will be subject to a form of safety measures if access is granted on the island.¹¹

In addition to the city zoning, the island is also subject to the Federal Emergency Management Agency (FEMA)’s Floodplain Zoning. The majority of NBI is deemed either an AE-zone or a VE-zone, the former an area subject to inundation by 1% annual chance flood event that requires flood insurance and in which floodplain management standards apply and the latter which has the same description and requirements but with “additional hazards due to storm-induced velocity wave action” (See Fig. 4).¹² Flood insurance requirements are only valid for properties under federally-backed mortgages, however, and as NBI is under the ownership of NYCDPR, flood insurance is

⁸ Interview with Michael Marrella, Director of Waterfront and Open Space Planning, DCP, October 14, 2015.

⁹ Vision 2020: New York City Comprehensive Waterfront Plan, New York City Department of City Planning, p.130, accessed September 22, 2015, http://www.nyc.gov/html/dcp/pdf/cwp/vision2020_nyc_cwp.pdf.

¹⁰ Interview with Michael Marrella.

¹¹ Ibid.

¹² “Zone AE and A1-30,” Federal Emergency Management Agency, accessed September 22, 2015, <http://www.fema.gov/zone-ae-and-a1-30>. and “Zone VE and V1-30,” Federal Emergency Management Agency, accessed November 22, 2015, <http://www.fema.gov/zone-ve-and-v1-30>. AE-Zones are sometimes referred to as A-Zones in documents.

not required for the island. Floodplain management standards are municipally-specific and thus the island falls under the jurisdiction of NYC FEMA building regulations by the Department of Buildings.¹³ The island and all its structures currently do not require any additional actions in regards to FEMA regulations; however, any new construction on the island will be held to the standards of both building codes and FEMA regulations.¹⁴ In cases of rehabilitation or restoration, insurance requirement is dependent on the 50% Threshold Barrier of the project. If the structure undergoes any “substantial damage” or “substantial improvement” in which the “cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred,” or the “cost [...] equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started,” insurance is required.¹⁵

Policies and Other Values

The policies that have been discussed thus far, give precedence to either ecological or social values of NBI, if not both. While there are other identified values within the island which are relevant to these regulations and plans, such as historical, aesthetic, associative, educational, and recreational, they can be interpreted as secondary impacts that branch off from the targeting of social values. For example, these policies and plans aim to improve and protect the ecological resources and increasing educational opportunities is one of the many strategies to achieve this goal. Plans to improve public health by way of accessibility to public space also indirectly impacts the recreational values of the site. With perhaps the exception of the island’s recreational values which seem directly related to the issue of increasing public access and public health, these values are not necessarily the main targets of the discussed policies.

Priorities and Precedence of Policies and Programs

All programs, policies, and regulations discussed above apply to NBI—no single program or policy takes precedence over others. This can prove difficult as some programs and policies contradict or are in competition with one another. In such cases, a strategic course of action is required, however tedious and extensive. This often calls for remaining neutral and vague on numerous proposals so as to not explicitly oppose a policy or program. In cases in which neutrality is not an option, other options must be considered or waivers of exemption applied for.

¹³ Appendix G: Flood-Resistant Construction, NYC Department of Buildings, accessed November 22, 2015, http://www.nyc.gov/html/gbee/downloads/pdf/buildingcode_appdx_g.pdf.

¹⁴ Interview with Michael Marrella.

¹⁵ *Appendix G: Flood-Resistant Construction*, NYC Department of Buildings, pg.19.

4. Statement of Significance

North Brother Island (NBI) is a significant part of New York City (NYC) because it possesses significant cultural heritage, ecology and has great potential to yield preservation, education and community benefits. The island, located in the East River, has two periods of significance: pre-abandonment (1881-1964) and post-abandonment (1964-present). Both periods are important, and the island equally reflects the social and institutional history of the island, and the evolution of abandonment and a disturbed landscape. The history of the island reveals the many stories of NYC, as well as national themes in the history of the United States. The two periods, while having different narratives, are closely related through the built fabric and ecological development. The culture and ecology present on the island do not exist without each other. The human disruption of the landscape during the pre-abandonment period resulted in a wild forest of invasive vegetation overtaking the built fabric during the post-abandonment period.

This urban forest is considered part of the South Bronx, an area of the city which is underserved in greenspace, parks, and other open space. The proximity to these neighborhoods creates greater social importance for NBI. The land is owned and managed by the NYC Department of Parks and Recreation (NYC Parks) and has the potential to provide park access and education to surrounding underserved communities. Balanced with the opportunities for community benefit is the ecological health of the island. North and South Brother Islands have become habitats for many gulls and colonial wading herons. Importantly, these species act as indicators for the health of the larger ecosystem, which affects the health of humans, plants, and other animals that live in the city.

The values of NBI are divided into three macro-categories: heritage, ecological, and social values. The island simultaneously possesses these three principal values and they work together to contribute to the significance of the island. The ecological value of the site has been prioritized since the 1980s when herons' use of the island began to be systematically recorded by the New York State Department of Environmental Conservation.¹ Despite the dominance given to the island's ecological values by managing stakeholders, it has heritage and social values that contribute to its significance. It is a greenspace that is visible from parts of the Bronx coastline and although access is illegal, it is still occasionally being used recreationally.² Furthermore, over eighty years of government-sponsored institutional use of the island has left a compelling record of how NYC dealt with contagious disease, rising population, and "undesirable" residents beginning in the 1880s. The

¹ Randall Mason, et al., "North Brother Island: Balancing Ecology and Cultural Heritage" (Preservation Studio, University of Pennsylvania, 2005), 19.

² Evidence of this is found searching social media sites and YouTube for pictures, videos, and blog posts by urban explorers accessing the island and from a meeting with NYC Parks employees on September 10, 2015.

many histories of this small island tell the larger history of NYC.

Heritage

Heritage value is the most historically rich among the three values. Heritage value is present in the different historical uses of the buildings and through deteriorated fabric and structure, showing vulnerability to weathering. Because of its different evolutions, the heritage value is found during pre-abandonment and post-abandonment periods.

As the geographical location of NBI allowed the island to be used for different purposes, the buildings on NBI were repurposed several times and the configuration of the island changed as well. Extant buildings represent different institutions, yet are related to each other as a set of buildings used throughout its inhabitation. The chronology of NBI's use during the pre-abandonment period can be summarized as follows:

During the pre-abandonment period, NBI played an important role in the history of medical quarantine in NYC. Beginning in 1881, the island was home to mostly poor, immigrant city residents suspected of being infected with contagious diseases.³ People were sometimes forcibly exiled from their homes and workplaces.⁴ This quarantine use was discontinued in 1943 and the island became housing for WWII veterans attending NYC universities from 1946-1951. In 1952, the buildings on the island were again repurposed into a rehabilitation center where juveniles were forcibly sent to recover from drug addiction.⁵ These curated uses came to an end in 1964.

The architecture on NBI demonstrates the change over time as multiple construction methods and architectural styles from the late 19th to mid-20th centuries exist. In the earliest building campaign, Philadelphia's famous salmon pressed brick was chosen as a facing material and a historic unreinforced load bearing masonry construction with concealed brick headers was used in order to face the building with uninterrupted American running bond.⁶ In a later building campaign more diverse building materials and systems were introduced to the buildings. Among the remaining buildings, unreinforced masonry structure is a typical construction system found on the island, but depending on size and purpose of the building, hollow clay tile, adopted concrete encased frame,

³ Sharon Seitz and Stuart Miller, *The Other Islands of New York City: A History and Guide*, 3rd edition (New York: Countryman Press, 2011), 213.

⁴ Randall Mason, "Wildness, Disease, and the Changing Civic Landscape: North Brother Island's History," in *North Brother Island*, (Fordham University Press, 2014), 17

⁵ Seitz, *The Other Islands of New York City*, 215-18.

⁶ The material and construction method are described in the specification of a hospital building, which was designed by the same architect, C.C. Haight, but demolished circa 1934. "To face all outside walls, chimneys, piers, etc., above water table with the best quality light red Philadelphia pressed brick. (...) To bond face work every fifth course by cutting in diagonal headers. To bond all other work every fifth course."

steel frame, or wood frame structures are also found. More varied buildings are found in historic photos, though they were demolished while the island was still in use.

NBI has associations that refer to the first period of significance. Isolation was a driving factor for the previous uses of NBI as a quarantine or a rehabilitation center. The isolated island enabled forceful exiles, most famously the forced quarantine of Mary Mallon, derisively known as “Typhoid Mary.” These past uses have imbued the island with a compelling inventory of buildings and associations with medical institutionalization, immigration, and the criminalization of addiction. Additionally, NBI has commemorative value as the site of the disastrous General Slocum shipwreck in 1904. The architect C. C. Haight was responsible for the earliest buildings on the island, some of which still stand.

Other associations have developed since the island was abandoned and contribute to its current meanings. During the post-abandonment period, little to no human intervention to the heritage on NBI has been undertaken. Hence, the buildings were left as they were in 1964. There has been no management plan for the buildings for the past 50 years, which has led to compromised structures and vegetation overgrowth.

The heritage on the island is continuous rather than momentary. Therefore all identified pre-abandonment and post-abandonment resources should be evaluated for preservation interventions. The different periods contribute to each other, and affect the island as it currently lives, and inform the next iteration of the island. However, the interpretation of the diversity of the architecture will necessitate the selective demolition and rehabilitation of the buildings.

Social

Although NBI is currently closed to visitation, people have visual access from the Bronx coastline and the East River. Kayakers and fishermen in rowboats make use of waters around NBI, while tours sponsored by the Audubon bring interested groups around the island. There is illegal recreational use of the island including camping, urban exploration, and geo-caching.⁷ The experiential qualities of the island attract both legal observation and illegal visitation, including interest in the institutional architecture decaying, isolation, wildness, and its rugged character.⁸ The aesthetics of the island draws interest from many demographics. The sense of wildness and isolation, while being in the middle of the city, is unique to the island. With the material culture left behind from

⁷ Sean Cole, “How to Get to North Brother Island,” *Radiolab*, Accessed September 12, 2015, <http://www.radiolab.org/story/170476-how-get-north-brother-island/>

⁸ Howard Silver, “The Jinx Project: Exploring North Brother Island,” *You Tube Video*, Accessed September 8, 2015, <https://www.youtube.com/watch?v=AIE1ASo9UwY>.

previous use, there is a strong connection and interest in the island as an example of landscape reclaiming human inhabitation.

NBI has potential educational value relating the history of medical quarantine and its architecture, ecology, wildness, and a disturbed landscape. An important social value the island can bring to the surrounding communities is the proximity to a forested area. There are strong opportunities for community youth engagement, including volunteer programs to remove of invasive plants and other stewardship programs.⁹ Currently some community stakeholders hope that access to the island will create interest in Hunt's Point and the South Bronx in general, and provide job training and economic development.¹⁰

Ecological

NBI, along with the smaller, adjacent South Brother Island, serves as a reserve for colonial wading birds and is particularly important as a habitat for the Black-Crowned Night Heron (*Nycticorax nycticorax*). NBI is part of a system of seventeen New York Harbor islands monitored by the New York City Audubon Society as part of the Harbor Heron Preserve.¹¹ The herons are closely monitored and encouraged in NYC as an indication of the health of the larger ecological system. When the environment, including the air, water, and plant life is healthier, more native species come back to NYC. A healthier ecosystem is beneficial to humans as well, and keeping viable habitats for the herons is important. NBI is a potential heron and gull habitat, and though there is no nesting activity on the island at the moment, South Brother Island supports a large colony, and NBI is a part of the foraging network of the herons in the East River.

The island is actively being restored with non-invasive plantings by NYC Parks. The restoration is aimed at increasing the ecological value, particularly on the southern end of the island.¹² NBI has a dense canopy of mature trees and is classified by NYC Parks as a forest. Mature trees within urban areas are important to maintain because they improve air quality, reduce temperatures and urban systems are less resilient than those outside of cities.¹³ The island is an example of a disturbed landscape. When the island was occupied, the land was clear-cut into a manicured lawn with planting, which formed the superficial ecology. Since the island has been abandoned, this

⁹ "ACTION visits North Brother Island," *YouTube Video*, Accessed September 8, 2015, https://www.youtube.com/watch?v=Xi_gMlOWJ3o.

¹⁰ Paul Lipson in discussion with the authors, September 2015.

¹¹ "Harbor Herons," *New York City Audubon*, Accessed September 8, 2015, <http://www.nycaudubon.org/issues-of-concern/harbor-herons>.

¹² "North Brother Island," *New York City Department of Parks and Recreation*, Accessed September 8, 2015, <http://www.nycgovparks.org/parks/north-brother-island/map>.

¹³ In an urban system trees will not regenerate as readily.

human-made landscape has been allowed to grow wild. NBI is an isolated case study of a disturbed landscape over-running buildings and infrastructure.

Conclusion

In thinking about the future of the island, each of the three macro-values: heritage, social, and ecological, are important to the island. The values inform an assessment of whether the public should be given any kind of access to NBI and if so, what degree of access should be allowed. At the moment, the ecological value of the island dominates the management plan and all actions on the island. Heritage and social values currently exist on the island and are exhibited through the illegal access by the public as well as informative panels located at Barretto Point Park. A new evolution of the island needs to incorporate all the values, more holistically. The layers of history and values on the island gives a rich experience to visitors, but human access and disturbance on the island can degrade the ecological value. Managing the island in a holistic way to maximize the heritage and social value, while preserving the ecological value is the ultimate goal. The next iteration of the island should incorporate these three macro-values in order to provide opportunities to continue to protect and strengthen the significance of the island.

5. Evaluation

5.1 SWOT Analysis

North Brother Island is a complex, remote and therefore, functionally closed system. The strengths and weaknesses for providing access are a result of the intricate interaction of its constituent parts: the natural environment and the built environment. The goal is to ensure it is a balanced one, and that efforts and resources be distributed strategically, but evenly among the elements of the island to ensure safe access in the future without jeopardizing the major features of the ecology and the built fabric.

Strengths

North Brother Island presents a series of strengths on a variety of scales beginning with the presence of physical fabric on the island that has historical significance. Although the buildings onsite are within a range of levels of integrity, the collection of these buildings when tied with the different periods of significance of the island are a significant contributor to the island's significance as a whole. At this larger scale, the island also presents a series of ecological strengths that together with its institutional history offer a new perspective from which to gauge notions of importance. The combination of institutional and ecological history with the ruinous state of some of the buildings create a sublime atmosphere on and off the island that in itself is significant, for example. From beyond the geographical bounds of the island, its strengths extend into the political sphere with support from key figures.

- Island as a part of a larger system
- Presence of significant physical fabric (buildings)
- Island presents both ecological and institutional history
- Historical significance (throughout multiple periods)
- Sublime qualities
- Presence of political support
- Material culture
- Landscape and ecological features

Weaknesses

Isolation and its related issues are the primary weaknesses of the island. The island is located in a flood zone which precludes certain governmental support as well as local political interest due to the elevated risk associated. Its isolation has also resulted in a general lack of resources, infrastructure, and regulation of the island. The difficulty in reaching the island has hampered building and ecological monitoring and regulation of the island to discourage trespassers. As a result, the buildings have decayed to a point where many of the structures present a severe safety risk to those in close proximity. The only evidence of monitoring, carried out by various stakeholders, is the counting and documenting of the wading birds who nest and forage on North and South Brother Islands. This also presents another weakness of the island, which is the management of North Brother as primarily a natural resource.

- Island located in a flood zone
- Aspects of the island are unsafe
- General lack of resources
- Island has a lack of infrastructure
- Little to no monitoring and regulation of the island
- Island is managed as a natural resource only
- Buildings have deteriorated beyond what was expected which
- Limits the experience

Opportunities

The potential for a collaborative management plan is particularly significant, especially one which considers the health and recreational benefits of the island as a new public green space in New York City. Educational and interpretive opportunities also exist regarding the wide-ranging history of the island and the potential to connect it to larger stories of New York City, quarantine or institutional history or the life of immigrants in a new country. The implementation of such a plan also has the potential to set a unique and practical precedent and prototype for the numerous other islands that are in comparable scenarios.

- Collaborative management plan
- Prototype for other islands

- Educational opportunity
- Interpretive opportunity
- Green space / health benefits / recreation

Threats

Looking forward, climate change will continue to threaten the already vulnerable island not only with sea level rise but also increased damage from more regular storm surges. The possible expansion of other infrastructure adjacent to the island, like LaGuardia Airport, threatens North Brother Island in indirect ways. The increase in airplane activity over the island may threaten the fragile ornithological ecosystems on the and around the island, for instance. A failure to balance the ecological and architectural aspects of the island also has the potential to jeopardize one or the other. Access to the island presents a perilous debate to the island: granting too much access to the island may cause overdevelopment on the island, irreversibly changing the island's character (both ecologically and architecturally); while, too limited access to the island presents its own series of challenges, specifically regarding monitoring regulation of the island. Overall, however, lack of timely implementation of any such plan may also lead to the cause falling by the wayside and support for any intervention on the island dwindling further.

- Climate change / storm surge / sea level rise
- Airport activity increase in the future
- Failure of effective planning / implementation delay
- Potential over-development will change the island's character
- Failure to balance ecological issues and building significance in decision making
- Too much access

5.2 Assessment of Designation Eligibility

5.2.1 National Register of Historic Places

Though North Brother Island is not currently listed, it qualifies for four different designations under the National Register of Historic Places. In the following section, the four categories of designation are considered, but two are dismissed as not applicable to the site.

Archaeological Site

The abandoned island's remaining material culture, such as scattered books, plates, and old furniture, as well as the ruinous state of the buildings, raise a potential for North Brother as an archaeological site listing. The National Register defines an archaeological property as "the place where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains" and one that "can be a district, site, building, structure, or object."¹ By this definition alone, NBI meets the qualification of an archaeological property as it allows a glimpse of the past way of life on the island through its human remnants. However, further discussion in the National Register Bulletin Guidelines for Evaluating and Registering Archaeological Properties emphasizes the "below-ground" character of the remains. The National Register of Historic Places, in discussing archaeological properties, focuses on the traditional archaeological dig site, which NBI is not. Therefore, NBI is not eligible for an Archaeological Site listing.

Historic District

The remaining built fabric of NBI, comprised of some 25 structures, all over 50 years old, raises the possibility of a historic district designation. This collection of buildings and structures meet Criteria A in the National Register Criteria for Evaluation in its historic use as a quarantine site, veterans' housing, and a rehabilitation center; however, its present state of integrity proves difficult to argue for a designation of that kind.² In its current state, the built fabric on NBI is completely overrun and its ability to convey the significance of the site as well as its historic uses has been overpowered by the "wildness" of the abandoned natural features. As the NPS defines a historic district as one that "derives its importance from being a unified entity," this site is no longer able

¹ "Introduction," National Register Bulletin Guidelines for Evaluating and Registering Archaeological Properties, National Park Service, Accessed October 30, 2015, <http://www.nps.gov/nr/publications/bulletins/arch/introduction.htm>.

² Integrity - the ability of the fabric to convey cultural significance through its location, design, setting, materials, workmanship, feeling, and association.

to stand as a “unified entity,” the buildings and structures on NBI are not eligible for as a historic district designation.³

Even in considering the period of abandonment (1963 to present) as the period of significance, for which the built fabric retains a great level of integrity, a designation as a historic district of buildings and structures overlooks the crucial component of this cultural significance: the natural landscape. As this designation does not offer room to interpret the natural landscape of the site, which is a key component of the abandonment era, it cannot effectively communicate the significance of this period.

Cultural Landscape (to be added to the CLI as a historic district)

As a site abundant in both cultural and natural resources, NBI can also be considered for listing as a cultural landscape. A cultural landscape is “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” and must meet the criteria for evaluation of the NRHP.⁴ Once a quarantine site as well as a later drug rehabilitation site, NBI was once a therapeutic site of institutional buildings and a manicured landscape, a designed cultural landscape. The narrative of its use fits under Criteria A as well as the historic context of “Expanding Science and Technology: Medicine—Clinical Specialties.”⁵ Through its remnants of street furniture such as fire hydrants, lamp posts, and partially uncovered curbs, as well as numerous standing specimen trees introduced at the time of use, this cultural landscape of North Brother Island communicates the site’s historic use/significance through its current cultural and natural resources. Furthermore, in also considering the period of significance of NBI as its period of abandonment (1963-present), the island’s eligibility for a cultural landscape listing continues to be applicable. The story of an abandoned institutional site is not unique to North Brother—the current generation has been inheriting sites of similar institutional (and its corresponding abandonment) history, such as Roosevelt Island, Ellis Island, etc.—and thus fits into the greater patterns of history (Criteria A). As the now-abandoned designed landscape grows wild and consumes the standing built fabric of the island, the ability of the site to communicate the story of abandonment grows stronger every day. And, because cultural landscape inventories and reports take into account both the natural and

³ “IV. How to Define Categories of Historic Properties: District,” National Register Bulletin - How to Apply the National Register Criteria for Evaluation, National Park Service, Accessed October 30, 2015, http://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_4.htm#district.

⁴ “Preservation Brief 36: Protecting Cultural Landscapes,” National Park Service, Accessed October 30, 2015, <http://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm>.

⁵ “Historic Contexts,” National Park Service Cultural Landscapes Inventory Professional Procedures Guide (January 2009), Accessed October 30, 2015, http://www.nps.gov/cultural_landscapes/Documents/CLI_Prof_Procedures.pdf, I-10.

cultural resources, as well as different periods of significance, this designation/documentation of NBI can effectively communicate the site's significance. Therefore, North Brother Island is eligible for a Cultural Landscape Inventory listing.

Individual Listings

Though the built fabric of the island does not retain enough integrity to communicate the story of the island as a cohesive, unified entity, a number of its individual buildings and structures are able to do so as individual listings. All well over 50 years old, the Gantry, Physician's House, Male Dormitory, Nurses' Home, and the Tuberculosis Pavilion are eligible for individual designations under Criteria A and potentially Criteria C. The buildings have a fairly high level of integrity, despite their relatively poor physical condition, in that they retain their original location, setting, design, materials, workmanship, and association. The "feeling" of place is arguable. The Gantry, in particular, will likely meet eligibility for designation as its counterpart in Port Morris in South Bronx has been designated in the NRHP in 2013.

5.2.2 New York City Landmarks Preservation Commission

North Brother Island is not listed on the city register in New York City, but could potentially qualify for any of the four city level designation types. The criteria are not as complex as those relating to the National Register, but their application might bring about more stringent scrutiny to any proposed changes made to the built environment.

Interior Landmark

For designation as an interior landmark, a building must be "at least 30 years old" and possess "a special character or special historical or aesthetic interest," which is conveyed through an interior space or spaces.⁶ While the interiors of the buildings on North Brother Island certainly meet these criteria, the structures fail to meet the most important criteria: that they are "customarily open or accessible to the public."⁷ The lack of structural integrity prevents any member of the public from accessing the interiors on even occasionally, so regular access is certainly not feasible without significant stabilization. In addition, the interior finishes and furnishings have been damaged

⁶ "Landmark Types & Criteria," NYC Landmarks Preservation Commission, 2015, <http://www.nyc.gov/html/lpc/html/propose/criteria.shtml>.

⁷ Ibid.

by the deterioration of the buildings and the infiltration of water and other elements. This has degraded the integrity of the interiors significantly enough that they would not be able to convey past appearance to an audience without being recreated, a choice not typical of landmark interiors.

Historic Districts

The New York City Landmarks Preservation Commission defines their historic district as an “area of the City with architectural and historical significance” and a “distinct sense of place.”⁸ While the significance of the island and its buildings may be taught or understood, the overgrowth and wild appearance of the island have obscured the once pristine lawn and street system. The island lacks the “coherent streetscape” required by the designation requirements.⁹ Like the consideration on the national level, the Historic District designation would ignore the ecological values identified by our studio.

Scenic Landmark

A scenic landmark must be a city-owned park or feature of the landscape, at least thirty years or older with “special character or historical or aesthetic interest,” just like the other designations.¹⁰ As has been stated, the overgrown nature of the landscape obscures the historic designs created for the island’s use as a quarantine facility. The vagaries of the designation criteria mean a case could be made for the abandoned and wild landscape but that would certainly indicate the emphasis should be placed on more recent history and not the entire past use of the island. The flexibility could also allow for a multi-layered designation narrative which includes the pre and post-abandonment eras.

Individual Landmark

Though the island as a whole does not convey a cohesive significance, some of the individual buildings meet the NYC LPC’s designation criteria. As with the national level, the TB Pavilion, Physician’s House, Gantry, Male Dorm and Nurses’ Home all possess the potential to be listed individually. This designation would apply only to the exterior of buildings “at least 30 years or older” and have “a special character or special historical or aesthetic interest or value as part of the development, heritage, or cultural characteristics of the City, state, or nation.”¹¹ These buildings

⁸ “Landmark Types & Criteria.”

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

represent important functions on the island and have the best structural integrity among the remaining structures.

Conclusion

At both the Federal and City level, designation of North Brother Island or its individual buildings or landscape features would be problematic. The increased oversight on the Island would make any proposed changes, from stabilization to demolition or interpretive interventions, more complicated and could, in fact, put a stop to those plans completely. The inclusion of a specific building or larger feature might offer increased funding sources but, given the interest in North Brother thus far, such limitations should not prove insurmountable. Instead, leaving the Island free of designations offers more flexibility to protect and interpret the Island beyond any constraints of defined periods of significance and offers the chance to intervene in ways that benefit the Island holistically instead of with just one feature in mind.

5.3 Comparables

We closely considered two groups of comparable case studies. The first group consists of individual cases of islands: Alcatraz Island in San Francisco, CA and Ellis and Governors Islands in New York City, NY. The three islands face similar challenges to North Brother Island and provide valuable insights on management and public access.

The second considers groups of islands and examines how these sets of multiple islands are understood and managed. Boston Harbor Islands contains islands with varying levels of access and activities permitted and all decisions are managed under one comprehensive management plan. This, along with the Gateway National Recreation Area, were used to consider if North Brother Island could be brought together with the other smaller islands of New York City and what might be needed to build a more comprehensive management plan to guide decisions.

5.3.1 Individual Cases

5.3.1.1 Alcatraz, CA

History

Alcatraz is a 22-acre island located 1.5 miles offshore of San Francisco, CA. Though it is most widely known for its 29 years of use as a federal prison and its various appearances in Hollywood films, the island's history is comprised of much more. Like North Brother Island, Alcatraz is a place of multiple layers of history. Originally a large rock inhabited by sea birds, it was under military jurisdiction from 1850 to 1933, used as the primary Union defense post of the bay during the Civil War as a part of the triangle defense of the Bay along with Fort Point and Lime Point. It also served as a site of American Indian imprisonment during the troubles of westward expansion, a POW camp and hospital during the Spanish-American War, and finally a military prison—all before it became the federal prison portrayed in movies.¹² While the strategic location as an island at the entrance of the Bay was initially to the military's benefit, its remoteness made facility maintenance too expensive to continue and Alcatraz was decommissioned as a military fort in 1933. In 1934, the facilities re-opened as a high-security federal penitentiary. The inmates serving on Alcatraz were those deemed "difficult-to-manage from other institutions."¹³ The penitentiary was decommissioned in 1963 due to maintenance costs yet again. It remained out of use until the late 1960s when it

¹² "The Post on Alcatrazes," National Park Service, Accessed October 26, 2015, <http://www.nps.gov/alca/learn/historyculture/the-post-on-alcatrazes.htm>.

¹³ "US Penitentiary Alcatraz," National Park Service, Accessed October 26, 2015, <http://www.nps.gov/alca/learn/historyculture/us-penitentiary-alcatraz.htm>.

became the site of three Indians of All Tribes' occupation movements, including an 18-month occupation of the island by young urban Indian college students demanding recognition of the US Government's mistreatment of American Indians of the West.¹⁴

Resources

Like North Brother Island, Alcatraz Island is a site abundant in both cultural and natural resources.

Alcatraz's complex layers of history are still physically represented in the built fabric of the island, ranging from historic cannons and tunnels, restored cell blocks, even to the graffiti left by the Indians of All Tribes. Though its media representation focuses primarily on its past role as a federal prison, the cultural resources present on the island today effectively show the different periods of use and change through time. The present structures range from skeletal architectural ruins to fully restored and accessible buildings.

In addition to the cultural resources on the island, Alcatraz gains prominence from its natural resources: namely, the seabirds. As a matter of fact, the name Alcatraz is a shortened, Romanized version of "La Isla de la Alcatrazes," or "The Island of the Pelicans" as referred to by Spanish explorers in 1775.¹⁵ Evidence suggests that a wide range of seabirds have nested and cohabited on the island long before human settlement. Though these birds had vastly disappeared during the 100+ years of human activity on the island from 1850 to the closing of cell blocks in 1963, they returned to Alcatraz when the level of human disturbance decreased and have lived and nested on the island since. Today, there are over 5,000 nesting birds on Alcatraz, including the Black-crowned Night Herons.¹⁶

Other natural resources on the island contribute to the habitat value for the seabirds and other wildlife. Though Alcatraz has no natural source of fresh water on site and thus has no estuary or stream value, the island provides a diverse ecosystem of marine, coastal, and terrestrial flora and fauna. It offers an abundance of marine algae and rich sources of food for the waterbirds nesting on the island.¹⁷ Additionally, the island consists predominantly of nonnative species of vegetation

¹⁴ "We Hold the Rock," National Park Service, Accessed October 26, 2015, <http://www.nps.gov/alca/learn/historyculture/we-hold-the-rock.htm>.

¹⁵ Erwin N. Thompson, *The Rock: A History of Alcatraz Island, 1847-1972, Historic Resource Study, Golden Gate National Recreation Area, CA*, (Denver, CO: NPS, 1979), 4.

¹⁶ "Waterbirds of Alcatraz," *National Parks Service Brochure*, National Parks Conservancy, Accessed October 26, 2015, <http://www.parksconservancy.org/assets/about/pdfs/waterbirds-of-alcatraz.pdf>.

"Seabirds," National Parks Service, Accessed October 26, 2015, <http://www.nps.gov/alca/learn/nature/seabirds.htm>.

¹⁷ *Golden Gate National Recreation Area Muir Woods National Monument Final General Management Plan/Environmental Impact Statement, Volume II*, National Park Service, 2014, Accessed October 26, 2015, http://www.nps.gov/goga/learn/management/upload/GOGA_FGMP_Volume_II.pdf, 42.

(only retaining roughly 5% of its native grasses and coastal scrub species); however, the current vegetation provides significant shelter/habitat on the island, including nesting material and protection for the birds.¹⁸

Like North Brother Island, Alcatraz also lies within the boundaries of protected waters as it is a part of the migration corridor for the Chinook Salmon, a species recognized on both federal and state levels as threatened and endangered. The waters around Alcatraz have thus been designated as critical habitat for these fish.¹⁹

In addition to the seabirds, Alcatraz is also home to deer mice and several bat species, and large population of California slender salamanders.²⁰ It also provides a small but significant stopping point for Monarch butterflies in fall migration, as the vines on the east side of the island are briefly used for one to five days.²¹ As Monarch butterfly population has been in drastic decline for the past decade in California, the use of this site in Alcatraz is anything less than significant.

Management

So abundant in both natural and cultural resources, Alcatraz was deemed a National Recreation Area in 1972 and a National Historic Landmark in 1986. The island is managed by the National Park Service and is maintained under the General Management Plan of the GGNRA, the Golden Gate National Recreational Area, also known as GOGA. The Park Service has commissioned and initiated various documents of the cultural resources on Alcatraz: a Historic Structure Report on the Alcatraz Barracks Building 6 and the Alcatraz Guardhouse Complex, a Historic Furnishings Report on the Main Prison Building, a Historic Resource Study of the Island from 1847-1972, a Cultural Landscape Inventory and a Cultural Landscape Report.²² These documents enable a regulated system of maintenance of the island.

Because of its role as a bird haven/sanctuary, the NPS is in partnership with the Point Blue Conservancy (Point Reyes Bird Conservancy) to monitor the breeding activity and external disturbances weekly during their nesting season from March to August.²³ To accommodate for the

¹⁸ *Golden Gate National Recreation Area Muir Woods National Monument Final General Management Plan/Environmental Impact Statement*, 45.

¹⁹ *Ibid.*, 56.

²⁰ *Ibid.*, 49, 51.

²¹ *Ibid.*, 52.

²² "Cultural Resource Publications," National Park Service, Accessed October 26, 2015, <http://www.nps.gov/goga/learn/historyculture/publications.htm>.

²³ *PRBO Report Alcatraz Island Seabirds 2010*, Point Blue Conservation Science, Accessed October 26, 2015, http://www.prbo.org/refs/files/12079_Acostaetal.2010.pdf, 3.

necessary protection of the seabirds, the NPS regularly sets Park Alerts to restrict access to heavy nesting areas on the island during nesting seasons. There are comprehensive mappings of the various bird colonies on the island as well as the areas of restricted public access.²⁴ A marine buffer zone of 500' is set around the entire island that closes the island's perimeter to all private vessels to protect seabirds during nesting season. However, during events of especially high potential for disturbance, even if outside the nesting season, this buffer zone goes into effect. It recently set such a marine buffer zone during America's Cup racing at the tail end of the nesting season. All visitors are required to attend an introductory briefing by a trained park ranger upon arrival to the island regarding the protection of the seabirds as well as the historic buildings.

The General Management Plan furthers the interpretation of the resources of the island by including "immersive visitors' center" at the embarkation site in San Francisco.²⁵ This visitors' center provides education about Alcatraz and the GGNRA. Historic photographs and models of the island and its resources are available for viewing as the visitors await their ferry at the embarkation site located at the northern waterfront of San Francisco.

Access to the island is also closely regulated. Though the ferries that service the island, Alcatraz Cruises, are not run by the NPS, Alcatraz Cruises LLC is an official concessioner of the NPS to provide transportation/access.²⁶ Outside of Parks vessels, these ferries are the only vessels authorized to dock on the island. Other ferry options offer Bay tours that pass by Alcatraz. Although Alcatraz is opened daily to visitors, the park service strongly recommends reservations as the number of visitors to the island is limited per day by capacity of both the island and the ferries. The island sees over 1.4 million visitors each year, with up to 4,400 visitors per day during peak visiting season, and up to 5,000 when evening programs are offered.²⁷

Alcatraz is also in the process of restoring historic gardens and reinstalling water cisterns.²⁸ As a remote island over a mile off the mainland, Alcatraz has no source of fresh water other than fog and rainwater. To accommodate for this, the facilities are adapting the historic use of grey water cisterns from the federal prison shower rooms to create a system designed to employ the force of gravity that will ultimately capture 15,000 gallons of rainwater.²⁹

²⁴ "Exhibit 3 Bird Nesting Season Closure and Trail Restrictions, Alcatraz Island," *2013 GGNRA Compendium*, National Park Service, Accessed October 26, 2015, <http://www.nps.gov/goga/learn/management/upload/compendium-2013.pdf>, 35.

²⁵ *General Management Plan Record of Decision*, NPS GGNRA, Accessed October 26, 2015, http://www.nps.gov/goga/learn/management/upload/GOGA-GMP-ROD-w-all-APNDS_30JAN2015-3.pdf, 5.

²⁶ Alcatrazcruises.com, Accessed October 26, 2015, <http://www.alcatrazcruises.com/>.

²⁷ *General Management Plan*, 106.

²⁸ "The Gardens of Alcatraz," alcatrazgardens.org, Accessed October 26, 2015, <http://www.alcatrazgardens.org/>.

²⁹ "Water Water Every Where..." National Park Service, Accessed October 26, 2015, <http://www.nps.gov/alca/learn/nature/water-water-every-where.htm>.

GOGA (also known as GGNRA) is also a part of the Central California Coast International Biosphere, a UNESCO-designated Golden Gate International Biosphere reserve. This biosphere reserve offers a unique ecosystem of marine, coastal, and upland resources in close proximity to a major metropolitan area. As a part of this Biosphere reserve, Alcatraz is under close research and monitoring of its wildlife populations, marine and terrestrial interactions, ecosystem health, etc. Varying levels of administrative authorities are in partnership to research and protect the natural resources of the area, ranging from university institutions and federal agencies, to municipal commissions and non-profit organizations. The goals of the UNESCO Biosphere reserve include effective management of the resources, scientific research, and educational projects. Though this biosphere reserve seems nature-centric, the program also includes research of traditional land use, traditional knowledge, and ethnology of the area.³⁰

In terms of on-the-ground management, NPS is in partnership with the National Parks Conservation Association, an independent, nonpartisan organization that works to address major threats facing the National Parks System. The NCPA is a major source of funding and program coordination for the NPS parks. In Alcatraz, NPCA volunteers make up almost 30,000 hours of work annually, ranging from maintenance and cleanup to monitoring and acting as interpretive docents.³¹ NPS is also in partnership with the Volunteer-In-Parks program that provides 300,000-400,000 volunteer hours to various programs and efforts within the GGNRA parks in a typical year. They are crucial to the ongoing operation of the GGNRA.³² The Golden Gate National Parks Conservancy provides more than \$80 million in assistance to provide support with education and interpretation programs, protection of resources, and with visitor program partnerships.³³

Lessons for North Brother Island

- Like Alcatraz's Historic Structures Report, Historic Furnishings Report, Historic Resources Study, Cultural Landscape Inventory, and Cultural Landscape Report, documentation of thorough documentation of all resources, not limited to structures, on NBI would aid in framing a more comprehensive management plan for the island.
- Alcatraz's mode of transportation provides a good example of granting concession to local

³⁰ "Biosphere Reserve Information: USA Golden Gate," UNESCO MAB Biosphere Reserves Directory, Accessed October 26, 2015, <http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?mode=all&code=USA+42>.

³¹ *Alcatraz Island State of the Parks Report, 2010*, National Parks Conservation Association, Accessed October 26, 2015, http://www.npca.org/about-us/center-for-park-research/stateoftheparks/alcatraz/ALCA_Report.pdf.

³² *General Management Plan*, p. 166.

³³ *Ibid.*

businesses and controlling authorized docking. Through concessions, NBI can establish connections to the immediate community of the South Bronx and support local organizations or businesses.

- Alcatraz's off-shore interpretation, the immersive visitors' center, at the embarkation site and an on-shore briefing from park professionals on safety and respect for the island's resources can be applied to NBI to not only engage visitors during their wait for embarkation but also to educate them on the resources present on the island. It will also clearly communicate the rules, regulations, and expected behaviors on site.
- Alcatraz's marine buffers and on-shore buffers for the protection of the wading birds as well as other marine and terrestrial flora and fauna provides NBI with an example of a successful use of buffer zones to protect the diverse ecological resources on the island.
- Alcatraz's partnership with various volunteer groups and conservancy for stewardship of the island sets precedence for NBI's future partnerships—it can provide significant amount of necessary labor and services on the island without requiring extensive funding.
- That Alcatraz is a cultural attraction that also successfully manages and educates its visitors of its diverse natural resources reinforces the fact that a site can be successfully managed without giving precedence to one type of resource over the other. While the site might seem to prioritize cultural resources over the natural, Alcatraz's extensive management, monitoring, and protection of its ecological diversity significantly contributes to the experience of the island. Its comprehensive approach to resource management is the most significant lesson that it offers NBI.

5.3.1.2 Ellis Island, NY

North Brother Island and Ellis Island, both small islands in the vicinity of New York City, have much in common in terms of history and use. Both were initially used episodically for temporary military purposes and were transformed into therapeutic landscapes in the late 19th century. Clearly, New York was struggling to suppress contagious disease at that time and Ellis Island, being first and foremost an Immigration Station also had a state-of-the-art contagious disease hospital, curing and mitigating the spread of foreign diseases like Typhoid, Diphtheria, and Trachoma before immigrants entered the country legally. North Brother Island shares this narrative of immigration and quarantine in how it became a quarantine hospital for those who were already citizens and contagiously ill. Both Islands see their history of human use end in the mid-20th century followed by a period of vacancy. The histories diverge here, where Ellis Island, with more notoriety and support,

reopened to the public for visitation by 1976. Since, Ellis Island has gained support to facilitate two restoration campaigns and has supported visitation steadily since 1990. Considering Ellis Island has many of the same ecological struggles such as abating invasive species, honoring endangered wildlife, dealing with flood plains, noise and air quality as well as having similar cultural heritage resources and issues of access, North Brother Island could look to Ellis Island's management plan as a prototype.

Ellis Island stands as one of the most infamous and significant cultural landscapes of America. Originally 3.3 acres, this 27.5 acre island is located in the New York Bay, and is made up of mostly land infill from the excavation of the New York subway system.³⁴ It was first used as a military fortification by the British and later by the United States before the Island was transformed into what it is most known for today, an immigration processing station and hospital.³⁵ Opened January 1, 1892, Ellis Island immigration station replaced the inferior Castle Gardens immigration station located at the Battery in New York City. Over 40% of immigrants entering the United States at that the turn of the century came through the gates of Ellis Island, only a fraction were turned away if incurable of disease or found mentally disabled.³⁶ After mass migration ended in 1924, parts of the Island were used for other purposes. Part was used as a deportation center, another part was used by the U.S. Coast Guard, periodically it was used as a hospital for the Army and as a Navy way station; all the while remaining an immigration station.³⁷ Ellis Island welcomed 12 million immigrants over the 62 years the facilities were open, before closing completely in 1954.

The site lay abandoned 22 years, however in the meantime, it became a part of the Statue of Liberty National Monument created by President Lyndon B. Johnson. Between the years of 1976 and 1984 the Island was opened for short stints of visitation, accessed by ferry service. During those years the infrastructure and state of the buildings declined rapidly. In 1984 the Statue of Liberty - Ellis Island Foundation, Inc. lead by Lee Iacocca, then Chairman of the Chrysler Corporation, raised 160 million dollars via private sector fundraising for the island's first restoration campaign.³⁸ September 10, 1990, the main building restored and adapted, opened to visitors as the Ellis Island Immigration Museum.³⁹ However the other structures on the island continued to deteriorate and were restricted from visitor access.

³⁴ Lorie Conway, *Forgotten Ellis Island*, Public Broadcasting Service. (Boston: Boston Film & Video Productions LLC, 2015).

³⁵ The Statue of Liberty - Ellis Island Foundation Inc., *Ellis Island History*, 2015, <http://www.libertyellisfoundation.org/ellis-island-history>.

³⁶ Lorie Conway.

³⁷ United States. National Park Service, *Ellis Island*, [Washington, D.C.?]: National Park Service, Dept. of the Interior, 1990.

³⁸ The Statue of Liberty - Ellis Island Foundation Inc., "About The Foundation," 2015, <http://www.libertyellisfoundation.org/about-the-foundation>.

³⁹ *Ellis Island History*.

Eight years later, a historical Supreme Court ruling transferred 24 acres, approximately 90% of Ellis Island to the jurisdiction of the state of New Jersey; leaving New York with only 3.3 acres of the North side. Governor Christine Todd Whitman who spearheaded this court case immediately appointed 13 individuals to a panel that would later be known as the Save Ellis Island Foundation Incorporated. These individuals directly partnered with the National Park Service, and were tasked with fundraising and the oversight of building rehabilitation, preservation and adaptive re-use within the perimeter of New Jersey's territory. Since, this organization has focused on bringing together stakeholders such as preservationists, historians, civic leaders and "average Americans" to take part in deciding the future of Ellis Island. They have created educational programs focusing on professional development workshops about diversity and other immigrant related issues in partnership with the National Endowment for the Humanities, the Geraldine R. Dodge Foundation and many other prestigious institutions. Notably by 1999, the foundation raised 8.6 million dollars to continue stabilization of the remaining 29 buildings on the island.⁴⁰

In 2002, the National Park Service completed a Cultural Landscape Report which directly aided in drafting the "Ellis Island Development Concept Plan: Draft Environmental Impact Statement," a year later. The Ellis Island Development Concept Plan is a document exploring three potential management plans that outlined restoration and reuse of the largely ruinous built environment and landscape along with policy, funding, and programming. Until this point, NPS had temporarily stabilized 30% of the built fabric on the island and planned to continue stabilizing or restoring depending on which concept plan was initiated. Each plan covered environmental and cultural resource consequences and explored the benefits and threats of each program. The first and least supported alternative was "no action" in which NPS would stabilize buildings temporarily, restrict access, and remove invasive plant species. Continued work would be done on the interiors of the Ferry building and Laundry/Outbuilding, both already having their exteriors restored. In addition, NPS would continue to follow the management plan instated in 1984.

The second and third alternatives were similar plans with a few key differences. Both promoted rehabilitation of all resources, restoration and adaptive reuse of buildings as economic stimulus that would only be reused in ways that would relate to the historic themes and contemporary issues of immigration. Both suggested building a permanent bridge while still using ferry services and improving infrastructure. Also highlighted was creating equal access provisions for those in need including subsidized ferry rates, reduced ticket prices, and free visitation days.

Alternative Two "Ellis Island Partners," promoted day access only, in which a campus for institutional and non-profit uses would be created. The island would be managed by NPS but

⁴⁰ "Who We Are." *Save Ellis Island Inc.* <<http://www.saveellisland.org/about-us/who-we-are/>> Accessed 7 October 2015.

programming would be the concern of the institutional and non-profit partners, honoring themes and current issues of immigration. A plan for a 10-15 year building restoration campaign was included that would be solely funded by government funding and private fundraising. All buildings would be restored to “core and shell” in which concessionaires would provide interior finishes and maintenance.

Three differed from Alternative Two in that it promoted overnight access wherein a small conference/retreat area with a policy research center equipped with administrative and study space be created for a small number of non-profits to use. This plan also included seeking out a private development partner to finance, develop and manage the conference facility. Also incorporated into the plan was a 5-7 year rehabilitation program that included many of the buildings on site, in which private financing, philanthropic donation and government appropriations would be used to fund the effort.⁴¹

Ultimately this development plan was abandoned due to it deemed unrealistic and expensive. The overnight access also presented a security risk that would involve instating intensive security screening that was not feasible. No comprehensive management plan took its place. According to John Knedak, Deputy Superintendent Statue of Liberty National Monument and Ellis Island the island has been managed sort of like a stabilized ruin that is more substantial; focusing on the atmosphere more than the infrastructure.⁴² Since 2004, the island has been maintained and additional tourism programming has been created including the American Family Immigration History Center (AFIHC) located in the museum, and The Peopling of America Center, the latest addition designed by ESI Design and fabricated by Hadley Exhibits with funding from corporate donations.⁴³ The Ferry Building was successfully restored by 2007 and the Laundry/Hospital outbuilding restoration is approximately 70% finished as of today. Ellis Island encountered a great deal of damage from 2012 Hurricane Sandy, which took a serious toll on the buildings not yet restored. Feet of water sat in the basements of these structures, and it has been a great effort of the National Park Service to remedy the damage.⁴⁴ The latest preservation effort occurred in 2014, where the Historic American Building Survey (HABS) photographically documented the side of the island that has not been restored.⁴⁵

⁴¹ United States. National Park Service. *Ellis Island Development Concept Plan: Draft Environmental Impact Statement*. [Washington, D.C.]: U.S. Dept. of the Interior, National Park Service, 2003.iii-xi.

⁴² Interview conducted on October 15, 2015 with John Knedak, Deputy Superintendent Statue of Liberty National Monument and Ellis Island.

⁴³ *Family History Center*, and *Peopling Center*, The Statue of Liberty - Ellis Island Foundation Inc., 2015. Web. <<http://www.libertyellisfoundation.org/ellis-island-history>>.

⁴⁴ Interview conducted on October 5, 2015 with Joseph Elliott, HABS/HALS photographer and adjunct professor at the University of Pennsylvania.

⁴⁵ Ibid.

As island systems, Ellis and North Brother Island share many of the same struggles. Both contend with air and water quality, noise pollution, acknowledging native plant and wildlife species, access to ferry terminals and the island, and Island Infrastructure. They also share the struggle of managing cultural resources that declined over a period of years and now have structural issue, hazardous materials, liability and safety concerns and interpretive needs. Ellis Island has had great support, but it has taken 40 years of perseverance and continual maintenance to get to the state it is in today.⁴⁶ Through all of the decisions and actions taken to restore Ellis Island as a cultural landmark, loyalty to the Historic themes and honoring cultural heritage has remained the central focus. Having similar timelines and periods of vacancy, in addition to contending with similar issues Ellis Island is a great example of management and development programming that could be a guide as to how to manage the cultural and ecological resources found at North Brother Island.

5.3.1.3 Governors Island, NY

Governors Island is a 172-acre island, located in New York Harbor, half a mile from Lower Manhattan and 400 yards from Brooklyn. Physically, the island was expanded by 103 acres in 1912, reaching its current 172 acres.

History

For the past 350 years, Governors Island has served New York City as a pasture, timberland, game preserve, summer resort, garrison, arsenal, prison and airfield. However, the island served a military function longest, with continuous use for almost two centuries. The United States Coastal Guard saw the significance of the island and managed it as a major component of New York Harbor defense system. In addition, the United States Army operated the island and headquartered several units there. When the Army left, the Coast Guard resumed operational responsibility stationing its Third Guard District and the Atlantic Area on the island until 1997.⁴⁷

After the long period of military use, a 150-acre portion of the Island was turned over to the people of New York, with both the City and the State assuming shared responsibility for the Island's governance and funding.⁴⁸ Other islands, like Roosevelt, the last island the city planned and developed, Governors Island was envisioned an educational, recreational park for the New York

⁴⁶ *Ellis Island History*.

⁴⁷ New York City Landmarks Preservation Commission, *Governors Island Historic District Designation Report*, (June, 1996), 2.

⁴⁸ "Governors Island: Overview," Accessed October 3, 2015, <https://govisland.com/about>.

citizens instead of a commercial area or private ownership.⁴⁹ In order to accomplish this masterplan, the City of New York created the Governors Island Preservation and Education Corporation (GIPEC), a not-for-profit organization responsible for development planning of the island.⁵⁰ Today, GIPEC is known as the Trust for Governors Island.

Management

Different parties manage the rich built heritage and ecological resources. A 22-acre, northern portion of the island is managed by the National Park Service (NPS) and remaining 150 acres are managed by the Trust for Governors Island. Additionally, 121 acres, known as Governors Island National Historic Landmark District, was designated in 1996 and includes the northern half and the southwest tip of the island.⁵¹

1. National Park Service

The establishment of the Governors Island National Monument was “to preserve and protect” Castle Williams and Fort Jay, “to interpret” the monuments, and “to provide an opportunity to educate the public” about the historical, ecological island.⁵² NPS is currently managing the area of a 22 acres land where the Fort Jay, Castle Williams, the dock and historic buildings are located.

In terms of a management planning, the Governors Island National Monument Final General Management Plan and Environmental Impact Statement proposed preservation planning alternatives based on four criteria;

- Desired condition of the resources,
- Kinds and levels of use,
- Kinds and levels of new development, if any,
- Management activities to maintain the resources and provide for public enjoyment.

Four alternatives were suggested on the report. NPS preferred Alternative D, developing

⁴⁹ Angotti, Tom, “The Governors Island Plan: Last Chance to Get it Right?,” Accessed October 3, 2015, <http://www.gothamgazette.com/index.php/development/2556-the-governors-island-plan-last-chance-to-get-it-right>.

⁵⁰ The Governors Island Corporation d/b/a The Trust For Governors Island: Mission Statement. <http://old.govisland.com/downloads/pdf/mission-statement-december-2013.pdf>.

⁵¹ NYCLPC, 1996, 1.

⁵² National Park Service, Governors Island National Monument Final General Management Plan and Environmental Impact Statement, (New York, 2008), 3.

the National Monument as a Harbor Center and providing educational opportunities to experience historical and ecological island and NPS sought out and collaborated with partners to achieve this goal.⁵³

2. The Trust for Governors Island

For the acres sold to the people of New York, the Trust for Governors Island was founded to manage the site and receive the funding shared by the City and the State. The Trust contracted with New York City for long-term management of the Governors Island and was given the authority to act as the landlord and authorizes leases of 69 years.⁵⁴ During the planning process, GIPEC, the predecessor organization of the Trust, suggested four conceptual models for the island development; Minimum Build Island, Destination Island, Iconic Island, and Innovation Island.⁵⁵ The redevelopment plan is on Phase Two. While the First Phase mainly focused on the Island's historic district, the Second Phase is centrally concerned with constructing four hills on southern end of the Island to provide, among other things, excellent views of the City. The Third, and final phase will focus on the outer edges of the Island.⁵⁶

Access

Currently, the island is open to public during the summer months from May to September and is only accessible via ferry. However, on 2006 RFP, GIPEC mentioned the possibility of an aerial gondola connection from Lower Manhattan and Brooklyn and considered other suggestions like rapid transit, bridge or tunnel access to the island.⁵⁷ There are currently three different routes for public access by ferry.

- Ferry from Manhattan: runs year-round providing an access to organizations on the island, the island's staff, contractors, students of the New York Harbor High School. This is the main ferry access to the Governors Island, which is operated by the Trust for Governor Island.
- Ferry from Brooklyn: only operates on weekends, Memorial Day and Labor Day during the summer.
- East River Ferry: a commercial ferry service, provides service on weekends during the summer.

⁵³ NPS, 116.

⁵⁴ "Real Estate Development Opportunity," Accessed October 4, 2015, <https://govisland.com/future/real-estate-1>.

⁵⁵ Governors Island Preservation & Education Corporation, Request for Proposals for the Preservation and Redevelopment of Governors Island, (2006), 10.

⁵⁶ "Development Overview," Accessed October 4, 2015, <http://www.governorsislandalliance.org/islanddevelopment/>.

⁵⁷ GIPEC, 12.

Ecology

Governors Island is the home of 141 different species of trees and several species of birds.

Bird monitoring is done via Internet-based journals. Created by Annie Barry, the Virtual Birding Journal documents her observations of species, such as Starlings, Robins, House Sparrows, Mockingbirds, Great Black-backed Gulls, Red-tailed Hawks, American Kestrels. Common Terns have also been observed on Governors Island. Nesting has occurred on the island since 2008, but the New York Audubon did not begin surveying until 2013. In the 2014 report, the Audubon observed the nests were located on three abandoned piers on the southeast end. According to the report, the number increased three times in just one year. The Audubon also suggested the continuous monitoring and conservation effort, as the Common Tern is a threatened species in New York State.⁵⁸ In May of 2015, Park and Public Space brought Max, a rescued Border Collie, to the island during the season to control the goose population and increase ecological diversity of birds and plants.⁵⁹

Built Heritage

Fort Jay and Castle Williams are the two most significant monuments, representing the First and Second American Fortification System. The monuments are individually listed as New York City and National Historic Landmarks. According to the GMP/EIS report published by NPS in 2008, the use of the historic buildings in the Historic District were suggested as following:⁶⁰

- Castle Williams: NPS proposed to rehabilitate as a space for exhibition and a public visitor center
- Fort Jay: proposed rehabilitation to the compound for in-residence research and programs on the island.
- Building 107: proposed rehabilitation to other necessary infrastructure for NPS administrative use.
- Building 514 and Building S-251: selected structures that are safety hazards or not contributing to significance of the Historic District.

As a part of the Second Phase of the redevelopment plan, Building 877 was demolished in 2013. Using recycled construction and fill materials, the ground was raised from 25 to 80 feet to form four

⁵⁸ New York City Audubon, New York City Audubon's Harbor Herons Project: 2014 Nesting Survey Report, http://www.harborestuary.org/reports/harborheron/2014_HH_Interim_Survey_Report.pdf.

⁵⁹ "Welcome Max, the Governors Island Working Dog!" Accessed October 2, 2015, <https://govisland.com/blog/welcome-max-the-governors-island-working-dog/>.

⁶⁰ NPS, 118-121.

hills. Various height of the hills will not only offer the public different experience from the Island but also create new topography for the future flood zone.⁶¹

5.3.2 Management Alternatives

5.3.2.1 Boston Harbor Islands

The Boston Harbor Islands are a collection of 34 islands and mainland parks located in the Massachusetts Bay.⁶² The parks are part of the National Park System and are managed by a conglomerate of federal, state, and local entities, which allow varying degrees of access to the different islands. The management team aims to provide recreational and educational experiences on the islands, while protecting their natural and cultural resources.⁶³

There are a wide variety of both natural and cultural resources on the Boston Harbor Islands. Massachusetts Bay is part of the Gulf of Maine, which is particularly nutrient-rich and supports a robust ecosystem. The islands are home to wide variety of coastal birds, mammals and marine life. There are 12 protected species that are known to inhabit the islands, which are protected by the Massachusetts Natural Heritage Program.⁶⁴ Much like NBI, many of the Boston Harbor Islands are dominated by invasive species due to past clear cutting for agricultural and logging purposes. Grasses and Sumac are among the most prevalent species on the island, but there are also a variety of successional species.⁶⁵

The Boston Harbor Islands have a long history of use from both the pre-colonial and post-colonial era. There are over 100 structures on the islands including sea walls, lighthouses, military forts, wooden cottages, brick institutional buildings and a Native American burial ground. Native Americans used the islands for agricultural purposes prior to colonization. During King Phillip's War many Native Americans were interned on some of the islands. The islands have an extensive military history as they were utilized in every major conflict between the Civil War and World War II. Several military forts are present on the islands, some of these forts are open to the public for

⁶¹ Design Principles; Transformation Through Topography, http://old.govisland.com/downloads/pdf/presentation_pdc_2013-04-22.pdf, 9.

⁶² "Boston Harbor Islands National & State Park." *Boston Harbor Islands National & State Park*. N.p., n.d. Web. 31 Oct. 2015

⁶³ *Boston Harbor Islands: A National Park Area: General Management Plan*. Boston, MA: National Park Service, Northeast Region, Boston Support Office, 2002. Web.

⁶⁴ "Boston Harbor Islands National & State Park." *Boston Harbor Islands National & State Park*. N.p., n.d. Web. 31 Oct. 2015

⁶⁵ United States. National Park Service. "Native Americans and the Boston Harbor Islands." *National Parks Service*. U.S. Department of the Interior, 31 Oct. 2015. Web. 31 Oct. 2015.

tours, while other sit empty and abandoned.⁶⁶ Deer Island is the houses a 19th century waste-water treatment facility that is open to the public. Several of the islands were populated summer cottages during the 20th century; these structures are actively being demolished as they become vacant.⁶⁷ The islands have remnants from over 5 centuries of inhabitation that illustrate the significant role these islands have played in Boston's history. The management plan identifies four themes that have been important throughout the islands' history: Islands on the Edge, Home in the Harbor, Portal to New England and Renewal and Reconnection.⁶⁸

It should be noted that although the NPS website has extensive information about the history of the islands, the official website for BHI hardly mentions anything about the islands' history, only the recreational and wildlife aspects are called out as points of interest.

Boston Harbor Islands became part of the National Park System in 1997. The National Park Service is responsible for the creation and implementation of the general management plan, however the day-to-day operations are overseen by a combination of federal, state, municipal and private organizations.⁶⁹ The Boston Harbor Islands Partnership, who is responsible for the management of the park, includes The Department of Environmental Management, Metropolitan District Commission, Massachusetts Water Resources Authority, Massachusetts Port Authority, The Island Alliance, The Trustees of Reservations, Thompson Island Outward Bound Educational Center, The Boston Redevelopment Authority, City of Boston Office of Environmental Service, US Coast Guard, National Park Service and two representatives of the Advisory Council. The Advisory council is made up of 28 members who are appointed by the NPS. These members represent 7 different stakeholder groups including, Native American tribes, local business districts etc.⁷⁰

Like North Brother Island, the Boston Harbor Islands have ecological, historical and recreational values. The multifaceted management plan, that accommodates the views of many stakeholders, allows for preservation and interpretations of a wide variety of narratives. Although the management of the Boston Harbor Islands is at a different scale of magnitude than North Brother Island, it is still an important example of how an island with many competing resources and a wide variety of stakeholders can be managed in a balanced way that preserves all aspects of the island.

⁶⁶ United States. National Park Service. "Buildings & Structures." *National Parks Service*. U.S. Department of the Interior, 31 Oct. 2015. Web. 31 Oct. 2015.

⁶⁷ Ibid.

⁶⁸ *Boston Harbor Islands: A National Park Area: General Management Plan*. Boston, MA: National Park Service, Northeast Region, Boston Support Office, 2002. Web

⁶⁹ Ibid.

⁷⁰ *Boston Harbor Islands: A National Park Area: General Management Plan*. Boston, MA: National Park Service, Northeast Region, Boston Support Office, 2002. Web

5.3.2.2 Gateway National Recreation Area

An important initiative of the National Park Service is to manage part of the New York Islands as a group through the Gateway National Recreational Area program. The program was established in 1972 with the bold idea of bringing a national park experience to the New York Metropolitan Area.⁷¹ It has 11 park sites and 26,000 acres of land and water spanning parts of Brooklyn, Queens, Staten Island and Monmouth County, New Jersey.

The first General Management Plan of Gateway was done in 1979. In 2014, seeing the changing expectation and demographics of the park's visitors as well as the increased need for natural resources protection, the Park Service drafted a new Management Plan, taking into consideration the new demand for recreation and latest scientific information regarding climate change including projections of sea level rise and the impact of Hurricane Sandy. The new plan offers three management alternatives. Alternative A is a no-action plan, which continues current management and trends. Alternative B and C are similar, but B is more ambitious and is the preferred alternative. Under Alternative B new connections would be forged with parkland and communities near or adjacent to Gateway. More convenient and affordable park access will be developed through trail connections, bicycle infrastructure, public transit, and water transportation. This alternative prioritizes joint management and operations for visitor services, orientation, programs, and facilities with New York City and other partners. Alternative C focuses resource management on beach and dune ecosystems and coastal defense landscapes. New recreational programming emphasizes low-impact activities that highlight preservation efforts as part of interpretation and education activities and promotes hands-on learning and outdoor skills. This alternative maximizes sustainable operations and concentrates activities, access, and facilities in distinct locations. Worth noticing is that, Hoffman and Swinburne, two islands that are in similar condition as North Brother Island in terms of size and historic development, are both kept inaccessible, though Alternative B provides an offshore dock and a water trail for wildlife observation.⁷²

In terms of manpower, the park employs 316 full-time equivalent employees (FTEs), which include full-time, part-time, term, temporary, and student employment. They are responsible for all day-to-day management and operations of Gateway. In addition, each year close to 5,000 volunteers in the NPS Volunteers in Parks Program contribute over 80,000 hours of their time to protect Gateway's natural and historical resources and to assist visitors.⁷³

⁷¹ National Park Service. *A New Vision for a Great Urban National Park: Gateway National Recreation Area Final General Management Plan*. 2014. Accessed 10/31/2015. http://www.nps.gov/gate/learn/management/upload/GATE_Final_GMP-EIS_Executive_Summary_-_April_2014-2.pdf

⁷² Ibid.

⁷³ Ibid.

Kayaks, ferry transport, bike lanes and hiking/walking trails provide transportation to and within Gateway National Recreation Area and each of its member islands. On the mainland, private vehicle and water transportation parking facilities are provided.

In terms of the impact of increasing public access, the plan lists the beneficial and adverse effect on natural and cultural resources under each alternative. Beneficial impacts would come from restoration of natural resources, partnership with research organizations and the application of the results, as well as the continuing restrictions and protection of listed species through fencing, buffers, and closures. Adverse effects would come from continued visitor use, which is unrestricted in some areas where listed species habitat exists and from increases in trails or other small-scale visitor amenities. The plan does not directly address how public access is geographically managed to minimize adverse impact. It is implied that some marsh lands in Canaries Pol, Swinburne and Hoffman islands are not accessible to the public and are protected as wildlife habitat.

New York City Islands

Many of the City's islands, especially the smaller ones, followed a similar historic trajectory.

While many began first as first family farms of wealthy merchants during the War of 1812, many were turned into defenses to protect the City: the outer bastions were on the Brooklyn and Staten Island shores, while the interior defense were constructed at Castle Clinton and Ellis, Bedloe's and Governor Islands.⁷⁴ In the latter half of 19th Century, as the population of the City continued to grow, problems of crime, poverty, and sanitation ensued. In this period, the City turned to its islands, which were nearby but isolated, an ideal place to keep the poor, the sick and the indigent in check. Between 1828 and 1892, Blackwell's, Randall's, Ward's, Hart, North Brother, Rikers and Ellis Islands were turned into quarantine hospitals, asylums, and prisons. Hoffman and Swinburne Islands were created by subway fill and served as quarantine stations for the citizens of Staten Island, who opposed building one on Staten Island proper.⁷⁵ With the decline of institutional use of the smaller islands in the City beginning in the mid-20th century caused by the realities of cost, corruption, and brutality, New York City has reclaimed most of the islands as recreation areas and wildlife preserves.

Evaluating North Brother Island along with other smaller islands, it is clear that North Brother Island, which falls into the general pattern of development on smaller islands in the City, also exhibits a greater potential among those not yet opened to the public. It is the only one that has

⁷⁴ Seitz, Sharon, and Stuart Miller. *The Other Islands of New York City: A Historical and Guide*. The Countryman Press, Jun, 2014, 3.

⁷⁵ *Ibid.*, 4

not only ecological value, but also a significant amount of built-fabric as witness of its institutional history.

Conclusion

The Gateway National Recreation Area and the overview of small islands in New York City provide a management alternative to North Brother Island. It is important to see the ecological connection and mutual influence between North and South Brother Island, as well as the abundant green space along the coast in South Bronx. Seeing North Brother Island as part of the broader narrative of the history of smaller islands in New York City also opens up more interpretation and education opportunities, connecting North Brother with more of the historic narratives of the City overall.

6. Fieldwork

6.1 Building Survey and Analysis

Aim

The goal for the building survey was to conduct a rapid conditions survey of the existing fabric, to summarize the findings, prioritize the structures for further investigation, and to use this data to inform the preservation approach to determine the feasibility of access on the island.

Preparation and Methodology – Site Visit One

Preliminary data was compiled from previous site visits, including data from the 2005 studio report, as well as data and findings made available by the New York City Department of Parks and Recreation and the NYC Department of Buildings. The need to survey over 25 buildings on the island required a simple, Boolean-based survey form to be created and pre-populated prior to initially visiting the site. This initial survey form incorporated basic information of the structure, including date of construction, height, and footprint size, as well as more detailed criteria based off the ATC-20 (Applied Technology Council building evaluation form). Legitimacy and repeatability of the survey process were highly emphasized when creating the form, and after reviewing several templates, the ATC-20 was chosen because of its capacity for rapid application and ease of use by multiple surveyors without compromising the accuracy of the data gathered.

The general Boolean categories for the evaluation consist of:

1. Overall structural hazards
2. Structural element hazards
3. Basic fabric information
4. Geotechnical hazards
5. Nonstructural hazards.

Also included, and not original to the ATC-20, is a section for succinctly/briefly evaluating vegetation on and around the structure.

The secondary purpose of the standardized survey form was the need to ultimately record the findings in a Microsoft Access database to streamline the synthesis, analysis, and presentation of data. Furthermore, the ability to quantify the findings in a standardized manner allows for ease

of compatibility among various analysis tools and techniques both now and possibly for further investigation in the future—all based off of a standardized data methodology.

Analysis and Conclusions – Site Visit One

Distinct deterioration patterns of the structures on the island are evident: heavy vegetation both on and around the structures, and in some cases through the assemblies; inherent vice in the design that led to generalized cracking and delamination of exterior wythes of brick; heavy residual moisture and retention within the masonry as well as the surrounding soil; differential settlement; compromised roofs on most structures; and wall assemblies exposed to exterior environmental conditions, with windows and doors missing or compromised.

The structures on the island fall into two primary structural categories: robust, utilitarian, sizeable, service buildings (including those with concrete structures); and primary, under-engineered, vulnerable, ornamental buildings further compromised by inherent vice in their constructional detailing (e.g. concealed, turned masonry headers that is the typical detail in the Haight-era buildings). The presence of these two distinct categories of buildings, both actively deteriorating, requires logical compromise, because, in general, the more historically and architecturally significant buildings are, the most structurally vulnerable.

The buildings on the island that are most structurally stable, based on our initial survey, are: the Shophouse (no. 22), Transformer Vault (no. 2), Government Service Building (no. 18), Coal House (no. 8), and Tuberculosis (TB) Pavilion (no. 4).

The 2015 studio conducted a qualitative survey to evaluate perceived structural, historical and aesthetic integrity. Tim Lynch, a forensic engineer, Andrew Fearon, an architectural conservator and Justin Spivey, a structural engineer, were surveyed for their opinion on each building in each category and these were combined with the opinions offered by the 2015 studio. This evaluation concluded that the most historically significant buildings are the Gantry (no. 20), Male Dorm (no. 11), Nurse's Residence (no. 14), the TB Pavilion (no. 4) and Physicians Home (no. 1). The most important buildings aesthetically are the Male Dorm (no. 11) and the Nurse's Residence (no. 14).

Recommendations

Based on the findings from the first site visit, the recommendation is that the Male Dorm and the gantry should be prioritized. Due to the deteriorated condition of both the staff house, the boiler room and adjoining smoke-stacks, it is likely that both buildings will have to be demolished,

leaving the Male Dorm as the only Haight-era building remaining on the island. It is essential to the interpretive narrative of the island to have a building from the initial campaign of construction. In addition, the Male Dorm faces imminent collapse due to the fact that its wood framed structure is seriously compromised. Therefore the male dorm should be stabilized as soon as possible.

The gantry is one of the most visible structures on North Brother and acts as the threshold to the island, as it did historically. It played an integral part in the island's connection to New York City and is therefore essential to the interpretation of the island. Because it is the most visible it is also one of the most environmentally exposed structures on the island primarily in terms of wind and exposure to marine conditions. Because of this visibility and value, efforts should be made to stabilize the piles and arrest the corrosion.

If a structure were required to be rehabilitated to support adaptive reuse, our recommendation would be to utilize the Shophouse (no. 22). It has a robust structure, is in fairly good structural condition and is an appropriate size to be repurposed.

Finally, the TB Pavilion (no. 4) and the Service Building (no. 12) should be assessed more thoroughly. Due to limited access and the scale of the building, our rudimentary ground survey did not adequately assess its condition. The structure of the TB Pavilion (no. 4) is robust, however there is evidence that the coping stones on the parapet are damaged. The extent of the damage present in both buildings is unknown.

Methodology – Site Visit Two

After reviewing the recommendations from the first site visit and further articulating the overall preservation approach, it was decided to focus the second site visit on the detailed documentation of the Male Dorm (no. 11), the Gantry (no. 20), and the Shophouse (no. 22). Due to the varying structural systems, stabilization plans, and reuse potential of each of the structures, we did not create a second round of standardized survey forms; rather, we created an individualized approach for each of the structures, customized to the unique deterioration and architectural details of each.

Along with Andrew Fearon and Justin Spivey, the Male Dorm's structural integrity and material conditions were assessed. Based on the results from the initial form, a new form was created in order to assess specific aspects of that building. All external elements were assessed and rated on a 1-5 scale (1- Failure/Total Loss, 2 - Poor/Major Loss, 3-Fair/Partial Loss, 4-Good/Minor Loss and 5-Best/No Loss). Detail and overall photographs were taken of each condition and a video of the building was shot with a GoPro camera, which allowed visualization of areas not accessible through a standard camera.

A detailed conditions assessment of the gantry structure, including the slip and dock, posed a unique set of challenges. The slip leading to the main structure is highly deteriorated and prohibited access and the water and wooden dolphin piles that surround the remainder of the Gantry made boat access and closer inspection of the structure impossible. Prior assessment highlighted three primary areas of concern that warranted further survey: corrosion severity of the gantry superstructure and auxiliary members; the condition of the corrugated sheet metal cladding in terms of the attachment detail and corrosion; and the overall condition of the slip structure. By using binoculars it was possible to view, in detail, the condition of the gantry remotely.

In order to confirm structural soundness of the Shophouse for its potential value for adaptive reuse, a further condition survey was conducted during the second site visit. The survey included confirmation of structure type, general assessment of the building envelope and interior, and an assessment using a 1-5 scale of openings. Due to its original design, the foundation of the building was raised 4' above grade to accommodate loading docks on the east face of the building. It was built as a freestanding unreinforced concrete building with a brick veneer, which made the building more durable so it has deteriorated less over time. Detailed photographs were also taken of the severity of tree damage due to close proximity to the structure; damage is notable on the southeast corner of the building. Photographs were taken as a means for further analysis in the future.

Analysis and Conclusions – Site Visit Two

The conclusions of the second site visit will be addressed as independent projects. Specific conclusions and recommendations for the Male Dorm and the Gantry are detailed in later sections of this report. No additional work will be completed on the Shophouse at this time because it is better condition than both the Male Dorm and the Gantry, which are in much greater need of stabilization and much more significant to the integrity of the island's narrative. Recommendations for the Shophouse will be covered in the later phases of the preservation plan for the island.

6.2 Landscape Fieldwork and Analysis

Aim

The goal of the landscape survey was to record existing conditions through a rapid assessment during first site visit.⁷⁶ Data was recorded on assessment forms and with GPS data collectors. The data was then processed and analyzed to create an existing conditions map that illustrates vegetation patches by vegetation height (canopy, sub-canopy, vines, herbaceous, and open ground), as well as small-scale landscape features; specimen trees likely planted while the island was human occupied; and vegetation restoration patches from 2005, 2014, and 2015. This analysis informed our assessment of tolerance for change on the island as well as our recommendations outlined in the preservation approach as regards access.

Preparation

The initial site visit to North Brother Island provided an opportunity for the team to record the island's landscape. Maps, GPS recording, photography, and survey forms were used to perform a rapid assessment of the vegetation and cultural landscape features. Pre-existing vegetation studies, maps and photographs were used to prepare for the site visit. Using the information about the island, the team could prepare an effective recording methodology. This data was then assembled to produce a recording of plant species, vertical structure, canopy height, as well as the location and integrity of cultural landscape elements.

Before arriving on the island, pre-existing recordings were analyzed to gain a sense of the layout of the island and the location of buildings and paths. The New York City Department of Parks and Recreation (NYC Parks) shared a plan of the island showing locations of the bird nesting locations, paths in use, the boundaries of the contracted site for restoration work and restoration work that has occurred from 2014 to mid-2015. This plan overlaid with a site plan from Christopher Payne's 2014 publication provided a sense of how the restoration areas, cleared paths and sensitive nest locations relate to the existing buildings and historic paths.⁷⁷ In preparation for our first site visit, a plan was created to illustrate the existing buildings, the cleared paths, restoration work, and cultural landscape features.

Existing studies provide information about two phases of restoration work on the island, the first

⁷⁶ While the building team conducted surveys during two site visits, the landscape team primarily conducted their survey during the first site visit. The work of the landscape team during the second site visit was to confirm what was recorded during the first visit and to work on individual projects. For this reason, results are not divided by site visit one and two as they are in the building survey.

⁷⁷ Christopher Payne, *The Last Unknown Place in New York City* (Fordham University Press, 2014).

program initiated in 2005 and the second phase from 2014 to November 2015. Defining the zones of restoration work informed our fieldwork preparation and process, as we would confirm the location of these restoration sites during our fieldwork and know to expect certain plant species. Aerial photographs available on Google Earth record intermittent views of the island over a span of more than 10 years. Studying these aerials, we identified an area southeast of the TB Pavilion that appears to have been reforested in 2005 and 2006; this information is corroborated by reports of the 2005 PennDesign Studio. The second phase of restoration work occurred from 2014 until November 2015, reaching completion during our Studio. In September 2015, a plan was provided to the team the completed restoration work. The plan showed a large patch in the southwest region of the island and a patch to the west of the TB Pavilion. The restoration work was completed as our Studio visited the island, and is documented in the available diagram of Existing Conditions.

Preparation for fieldwork was also informed by a survey of the existing vegetation, as documented by NYC Parks in 1989.⁷⁸ The 1989 Survey served as useful reference for fieldwork preparation, providing the fieldwork team with the general locations of vegetation and cultural landscape features. The 1989 Survey divides the island into 14 study areas and records the vegetation and cultural landscape features for each of the zones. The survey was useful for determining the plant species that the fieldwork team may expect to see on the island, though it was certain that the exact location and species would have changed over the past 25 years. The 1989 Survey was also useful for providing comparisons with the restoration work; overlaying the 1989 diagram of vegetation zones with the plans of NYC Parks restoration work, we could identify areas of the island that have been replanted since 1989. The areas that have been restored since 1989 are primarily those that were recorded in 1989 to have contained invasive species, such as a patch of mugwort immediately to the west of the TB Pavilion. Areas that were not impacted by restoration work could be compared to the 1989 Survey, providing our fieldwork team with a basic sense of what to expect when we walked through the island to conduct our own survey. For example, the fieldwork team expected to find ailanthus on the east coast because it was mentioned in the 1989 study and we were surprised to not find as much ailanthus here as expected. Assessing past studies, the fieldwork team determined that it would be important to record patches of vegetation on the island, indicating the composition of the patch (open ground, grass, herbaceous, woodland, vines), the height of trees, vegetation that appears to have been planted as landscaping, soils and topography, and shrubs that could be used as habitat.

We referred to the “Guide to Cultural Landscape Reports” to determine the appropriate cultural

⁷⁸ “Natural Area Mapping and Inventory of North Brother Island 1989 Survey”, City of New York, Parks and Recreation, Natural Resources.

landscape characteristics that could be recorded.⁷⁹ A historic site plan provided in Hope Winthrop and Harold Williams's 1978 study provided further information about the location of various cultural landscape features: the southeastern dock, the southwestern boat launch, and the cistern and smokestack at the center of the island.⁸⁰ Existing photographs reveal street furniture such as light posts and hydrants throughout the island, as well as evidence of former land use such as a tennis court, fences and curbs. The team determined that it would be important to document these features of the island that indicate historic uses.

Methodology

After analyzing existing studies of the island, we created survey forms and maps for the fieldwork. The island was divided into six zones. The boundaries of these zones were drawn to enable easy navigation on the island, as the boundaries often connect directly from one corner of a building to the other, enabling on-the-ground navigation, and the existing paths access the interiors of each of the zones. The boundaries of fieldwork zones were also chosen to reflect the visible patches of vegetation in aerial views, the 1989 survey, and the NYC restoration map. For example, the east edge of the island is represented as a distinct region in each of the aerial views and the 1989 survey; this region has soil composed of the fill that was deposited in this region in 1909. Photographs and site maps also provided opportunities for understanding the composition of the island.

Survey forms and paper maps were created and brought to the site in order to delineate patches of vegetation and record natural and cultural features. We made a Google Map showing the boundaries of the fieldwork zones; these maps could be referenced on team members' phones to locate within the fieldwork zone boundaries and more accurately draw on the paper map. The survey forms contained fields for recording vegetation and cultural landscape features.

For each field we provided a key code (e.g. P1) that would be written on the map as a locating reference point. The survey included the following sections, with several fields for recording:

- General Patches
- Landscape Plantings
- Individual Large Trees
- Habitat Vegetation

⁷⁹ R. Page, C. Gilbert, S. Dolan, "A Guide to Cultural Landscape Reports: Contents, Process, and Techniques"

⁸⁰ Hope and Harold S. Winthrop. Corp Author Institute on Man Williams, Science, and Center Community Renewal. Toward North Brother Island. Rensselaerville, NY.: Center for Community Renewal Institute on Man and Science, 1978.

- Soil
- Topography
- Paths/Roads
- Structures and Buildings
- Constructed Water Features
- Other Land Use Traces
- Views

Analysis

Two site visits permitted the 2015 Studio to record the vegetation and cultural landscape elements on the Island. The team recorded variation in vegetation density and plant species throughout the island. Vegetation structures include: tall canopy and vine cover in the north end, herbaceous and sub-canopy cover on the east end, dense forest in the center, and herbaceous cover to the south. Landscape plantings are also apparent throughout the island, with species that include pin oak and London plane. Other individual large trees, recorded for their visual impact, include Lindens. Street furniture is apparent throughout the island, and consists of utility poles, streetlights and fire hydrants. The historic paths have only been partly uncovered, and they reveal variation in composition (cement gravel and yellow brick). Other land use traces include metal grates in the ground and a seawall (in two phases). The condition of these elements has been recorded. See attached plans for existing conditions of vegetation patches, small cultural landscape features, trails, seawall, and specimen trees.

Zone 1: The entrance to the island on the west side. Six patches of vegetation were recorded. The zone mainly consists of forested area with a high canopy and low herbaceous ground cover. Species recorded include Maple, Poison ivy, and English ivy. A patch of kudzu is located south of the entrance path beside the boiler plant and morgue. Cultural landscape elements include a paved trail leading from the gantry to the core of the island and a partly paved path leading south past the boiler plant. A coniferous tree is recorded beside the Physician's house, a remnant of early landscape planting on the island. A chain link fence is along the west edge of the island north of the gantry. Street furniture includes three hydrants, water line cover, manhole cover and chain link fence posts.

Zone 2: The end of the island located north of the TB Pavilion. Eleven patches of vegetation were recorded. The zone mainly consist of tall Norway maple canopy and low English ivy vines. The

coastal edge of the zone is comprised of denser and lower vegetation, with herbaceous vegetation beneath the sub-canopy. An area of recent forest restoration work is at the southwest edge of the zone, near the west end of the TB Pavilion. As recorded above, this area that used to consist of mugwort has now been replanted with young trees (“whips”). A patch of rare orchid is located at the center of Zone 1, to the west of the TB Pavilion north wing, and is marked with tape. Landscape plantings recorded include a 94 foot high Pin Oak to the northwest. Large Linden trees are also recorded to the west. A cement seawall structure traces the perimeter of the island. Where the seawall has been breached, three beaches are recorded. The beaches have a ground cover of gravel and bricks. Cultural landscape elements include this seawall, as well as a utility pole. Site plans show a path through Zone 1 but it is mostly concealed by vegetation. Part of this trail is visible at the east end of Zone 1, revealing a yellow brick paving.

Zone 3: The inner core of the island between the buildings. Six patches of vegetation were recorded. The zone mainly consists of a dense forest composed of herbaceous, sub-canopy and canopy trees with vines. Plant species include Lindens, Maples, and English ivy. An area of 2005/2006 reforestation is now a healthy forest of sugar maples and other tree species. Woody debris is also recorded. Cultural landscape elements include a well-defined street with iron and cement curbing. The east branch of this historic path has not been completely uncovered. Other land use features include three hydrants, a utility pole that still has its components, two stumps of utility poles and a metal hatch in the ground.

Zone 4: The east edge of the island. Five patches of vegetation were recorded. This area of the island has a different soil composition, as fill was deposited here in 1909. The zone mainly consists of sub-canopy and herbaceous vegetation, with plant species such as sumac and mulberry. The north end of the zone 4 is forested with taller canopy cover. There are fewer ailanthus trees in zone 4 than recorded in earlier surveys. The 1989 study recorded a patch of sumac at the north end of zone 4; this area is now forested with Norway maple and herbaceous species. Herbaceous vegetation in this zone includes solidago, a salt tolerant species that can withstand the storms and seawater that likely strike this east side of the island. Landscape plantings include a London Plane adjacent to the Nurse’s Building. A mature black cherry tree is also recorded; this plant may have been planted as a landscaping tree. Cultural landscape elements include a well-defined cement paved street as in zone 3. Other land use features include two hydrants and three lampposts (one is broken in two). A beach on the south end of zone 4 contains remnants of a seawall and ruins of a large dock structure. Several sections of this area were replanted in November and October 2015 to remove invasive species.

Zone 5: The region south of the Coal House, northwest of the Nurse’s Building and including the west coast. This area contains the tennis court and the remains of a church. The zone is mainly

forested with Norway maples. The tennis court contains Norway maples and English ivy. A concrete pad is located just south of the Coal House; herbaceous vegetation such as primrose, solidago, and pokeweed grows on this concrete pad. The coastal edge of zone 5 is a dense forest of herbaceous plants and trees. Cultural landscape elements include a tennis court, two hydrants, a lamppost, utility pole and a concrete wall to the west of tennis court. Fence posts are set in the ground to the north of the tennis court.

Zone 6: The southernmost end of the island, south of the tennis court. The zone mainly consists of sub-canopy and herbaceous cover, with denser vegetation at the perimeters of the zone near the shore. Much of the zone has been recently reforested with small trees (whips). The southern-most end of the island has wild apple trees. A beach is at the southeast end of the island, with a ground cover that includes bricks, gravel and coal. Cultural landscape features include a historic path, a newly cleared path, and the ruins of a lighthouse. A section of fence is located to the north of the lighthouse.

Conclusions

The conclusions drawn from this analysis by the landscape team and in discussion with the entire studio are incorporated into the Tolerance for Change description in the following section of this report.

6.3 Tolerance for Change

We were able to use the analyses conducted by the North Brother Island (NBI) building and landscape teams to put together a plan for the tolerance for change. Change can be the result of more management in the form of improvements, rehabilitation, or stabilization to the buildings and landscape. It can also be the result of inaction with the continued ruination of the built fabric on NBI. We had both objective and subjective survey information for the majority of buildings on the island and a good knowledge of the areas with old growth vegetation and built landscape features. However, we wanted to include the experiential qualities of the island into our final discussions about tolerance for change on NBI. In order to gauge the collective experience on the island, we had each member of the studio make a mental map, calling out distinct spaces and using words to describe their experiences there. We then took these maps and combined the words (which were geographically specific) onto one map. This, along with our analyzed data from the two visits to NBI, formed the basis of defining the experiential qualities of the island. We found there was a consensus on five areas, each of which have varying degrees of tolerance for change. They are: the Front Door, the Spine, Trees and Ivy, the Coast, and the Meadow.

“The Front Door” is the area where we landed, where the Gantry and Ferry Dock are. This, without a doubt, informed our impression of this space as an entryway. It is characterized by flat surfaces, open views, and a few landmark structures, namely the Gantry and the Smokestacks.

“The Spine” was one of two areas that had a wide consensus in the mental mapping exercise as a memorable place on NBI. It is the most legible path in the forest canopy, consisting primarily of a road that has been cleared by Department of Parks and Recreation (DPR). The legibility of the spine is reinforced by the way the Male Dormitory, Staff House, Shop/Storehouse, Tennis Courts, and Nurses’ Home frame this part of the site.

The “Trees and Ivy” area was another that garnered wide consensus. This is an area characterized by a tall canopy (around 60 feet) of predominately Norway Maples with some Lindens. The understory is primarily Norway Maple saplings aside from a small restoration patch. There are no significant patches of herbaceous plants, aside from an orchid that grows north of the Tuberculosis Pavilion. The ground and many of the trees are covered in English Ivy, with some Poison Ivy and Virginia Creeper. The overall effect is a cathedral-like space where light filters from the canopy above onto the ivy-covered ground. The ecology here is disturbed, consisting primarily of highly invasive plants (Norway Maple and English Ivy), however it is the ability of the plants to outcompete all other vegetation that creates the quality of this space. This is a distinct place on the island that can be used to interpret disturbed landscapes to visitors.

“The Coast,” which is on the eastern side of the island, is primarily shrub forest with White Mulberry

and Staghorn Sumac as the dominant species. These are at sub-canopy level, rarely reaching heights above 20 feet. The relatively patchy vegetation and amounts of open ground are most likely the result of the coast having the highest vulnerability when the island is hit by nor'easters, several breaks in the sea wall and higher levels of erosion (both from breaks in the sea wall and because this soil is made up of fill). This area allows for open views east and south of the island, which is what people were noting in their mental maps.

“The Meadow” stood out because of its noticeably different vegetation structure. This area has predominately Red Sorrel, Evening Primrose, and Mugwort, all of which are herbaceous plants that rarely exceed 3 feet in height. Compared to the majority of NBI, which is heavily forested, this area offers a distinct experience open above, but with dense ground cover. The experience of this area should remain essentially the same even after DPR conducts restoration work to replace the dominant species with native grasses.

The areas with the lowest tolerance for change are the Spine and Trees and Ivy. The buildings in these areas are not only important for interpreting the historic use of the island, but also for maintaining these distinct spaces. The Physician’s House and Tuberculosis Pavilion work to frame the entry into the Trees and Ivy area and the south wall of the Tuberculosis Pavilion creates a sense of enclosure once you are in that space. The buildings along the spine all contribute to the legibility of the path through that area, but from both a historical and structural perspective, the Male Dormitory, Shop/Storehouse, the Tennis Courts, and the Nurses’ Home should be preferenced to hold that space. The mature canopy trees in both these areas are important to the quality of the space and should be maintained throughout the process of building stabilization.

If the Ferry Dock remains the landing point for visitors, it will be very important to maintain the Gantry and the Dock to guide people into the space. Likewise, interpreting the Smokestacks, even if they cannot be maintained as they are for structural reasons will be important. The Meadow can undergo changes in plant species, but the character as to layers and height of vegetation should be maintained. The Coast is partially in a zone that will be off limits to visitors as it historically had birds nesting there. However, a portion of this area can remain accessible to visitors, which is described in phase two of our access plan.

6.4 Management Analysis

To determine a management plan for the island, we synthesized all of our information regarding existing conditions, character areas, and qualitative analyses. Using these reports, we determined four criteria to guide the management strategy: Environmental Sensitivity, Risk Voids, Experiential Quality, and Building Diversity. Each of these criteria was overlaid on a plan of the island.

Environmental Sensitivity is the only exclusive and non-negotiable criterion that guides the management plan. The environmentally sensitive south-end of the island is determined to be inaccessible, as this 4.5-acre region contains bird nesting areas and precious habitat. We propose that this area is off-limits.

The next criterion is Risk Voids. These areas pose little danger from building instability, as determined by the gravity maps produced during the building structures analysis. The least amount of intervention is required for providing safe access to these areas, and therefore these regions are most amenable for early access. The Risk Voids on North Brother Island form a corridor from the Meadow across the island to the east. This corridor serves as a trajectory that may guide early stabilization efforts on the island. Visiting the Risk Voids, however, does not provide a complete experience of the island. We propose that the Risk Voids provide locations for early access.

The next two criteria are Experiential Quality and Building Diversity. These areas of the island will allow for an interpretation of the island's history and an experience of its character. Some of the areas of Experiential Quality and Building Diversity lie outside the Risk Void, indicating that further interventions are required before access is allowed. A T-shaped zone including the center spine and the north end contains important characteristics but is not yet safe for public access. The Meadow, however, includes overlays of Experiential Quality, Building Diversity, and Risk Void.

The Meadow therefore lends itself to serve as an area of early access, providing a rich experience of the island in a safe location. Using this approach then, it is clear that the Meadow is most amenable for immediate access, while the spine and north end may be accessed after required building stabilization.

7. Preservation Approach

The 2015 Studio's initial introduction to North Brother Island described the site as an important historic landscape with significant ecological values. The now abandoned island was said to retain remnants of buildings from its time of use within the context of a landscape gone wild upon human departure. Even with the limited and brief statements offered, the site fits exactly the definition of a cultural landscape: a "geographic area, including both cultural and natural resources and wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values."⁸¹ We immediately recognized that we would approach this studio from a cultural landscape preservation perspective—the only approach that would enable us to study and analyze all aspects and resources of the island.

North Brother Island is a complex cultural landscape with a multiplicity of resources, values, and interests. The ruinous state of the buildings and structures on the Island stand witness to its past uses as a quarantine island, a veteran housing complex, and a drug rehabilitation institution, as well as a site of institutional abandonment so common in the mid-20th century. NBI's location within the boundaries of the nationally protected NY-NJ Harbor Estuary as a site of ecological diversity and value, as well as its role as a reserved nesting site for colonial wading birds, the Black-crowned Night Herons (*Nycticorax nycticorax*) in particular, presents itself as a great ecological resource for the City of New York and the greater region. Furthermore, under the management of NYC Department of Parks and Recreation, NBI is designated a "Forever Wild" site under the city-level program and is undergoing forest restoration efforts to reintroduce native species to an island gone wild with introduced and invasive species. Corresponding to these resources on the island are heritage, social, and ecological values, all of which further contribute to the significance and uniqueness of NBI in the larger context of the City.

These island resources and values have caused a complexity of policies, regulations, and programs to be put in place by various organizations and levels of government agencies for safety and management. In regards to the cultural resources of the site, the presence of the remaining built fabric on the island introduces the building codes and regulations, city zoning codes, the floodplain regulations, and even the Waterfront Revitalization Program by the Department of City Planning. On the natural resources side, the marine and terrestrial ecological resources brings the Hudson Estuary Program, the Clean Waters Act and its subsequent lower level governmental programs, as well as the New York City Audubon and the NYC Department of Parks and Recreation. Despite a seemingly holistic set of management programs and regulations, however, NBI is currently man-

⁸¹ National Park Service, "Preservation Brief 36: Protecting Cultural Landscapes," Accessed December 16, 2015, <http://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm>.

aged as a no-access natural resource site only, giving precedence to bird habitat conservation and forest restoration. There are no actions in place for the protection, preservation, or interpretation of the island's cultural resources. The management of North Brother Island as primarily a natural resource is consistent with the findings of the 2005 Preservation Studio focused on the island: it gives priority to the presence of the Black-crowned Night Herons, deciding a forever wild management approach was most appropriate in the presence of the birds, and to address the cultural resources of the island only if their presence on the Island ceased in the future.

Ten years later, with further research and analysis, we have determined that North Brother Island should address the management of all of its resources in a holistic, comprehensive approach rather than create a prioritized list for emphasis and attention. Since the 2005 study, the built fabric has deteriorated even more drastically to a point of further ruin and instability; effects of storms and climate change have become more urgent; and the herons have stopped actively nesting on NBI. As the presence of the protected birds was of primary concern previously, their absence opens up the island to the possibility of increased human intervention. With this in mind, North Brother Island, in its current state, requires immediate care in its cultural resources if the site's histories are to be preserved. Actions are required to increase resilience against climate change in both the Island's ecological integrity as well as its sea wall. In other words, NBI now requires immediate attention to protect its natural *and* cultural resources.

Upon our analysis of buildings and landscape surveys of the Island, we have determined that the buildings require urgent intervention—in some cases to slow their deterioration and in other cases to deconstruct them, in acknowledgement that they are beyond repair and present significant safety risks—more so than the site's natural resources. However, as the natural resources also call for substantial attention over time, our 2015 studio has decided to place greater focus on the built environment of the Island in the early stages, and eventually broaden its scope to encompass more ambitious interventions on the natural resources of NBI in a comprehensive, holistic management plan. The ongoing forest restoration efforts by Parks and monitoring by NYC Audubon will continue throughout all phases. This approach towards a holistic management of the island reflects our findings that cultural and natural resources cannot be split and managed separately—the two resource types present a strong interrelated impact on NBI and should be addressed inclusively with one another.

Tasked with the challenge of determining the plausibility of public access to North Brother Island in this 2015 studio, we applied our concept of a *holistic* approach across a spectrum of access options to determine the optimal level of intervention and access. Taking the National Park Service model of considering four scenarios, we sketched four different levels of access: open park access; seasonal, regular access; limited authorized, seasonal access; and no access/current policy. In each

scenario, we assigned various types of intervention to achieve the conditions necessary to grant the said level of access. Each category took into consideration the Island's built fabric, plant communities, protected birds, ecological restoration efforts, community engagement, economic development opportunities, environmental resilience, funding sources, necessary labor, and other off-site measures as a means of establishing an all-encompassing management strategy. Of these four access scenarios, we came to a decision that the best option would be to grant limited, authorized seasonal access while maximizing the protection of resources on the island—the lowest level of access on the spectrum—though adopting some actions listed under the seasonal, regular access option to increase efficiency in management. This scenario minimizes impact on both the historic fabric as well as the landscape of the Island. Further, we developed four phases of progressive implementation of limited public access, stretching over twenty years.

This intervention plan, developed from the aforementioned scenario analysis, postpones public access as long as possible to execute necessary interventions that bring its resources up to a safe, stable, and manageable state. With the goal to preserve as much historic fabric as possible within the bounds of available resources and safety considerations, we recommend that a few buildings of high integrity undergo stabilization. Some structures are beyond repair and present more risks than benefits; these buildings have been slated for demolition. In light of our minimal-impact approach, we have also established that no new construction on the island will be contemplated. The plan also continues NYCDPR's forest restoration efforts on the island as a central part of the island's management throughout its multiple phases; it also defines and sets definitive buffer zones for the herons' nesting area, despite their lack of active presence, to conserve and maintain a viable habitat for the possibility of return in the future. Branching from the NYCDPR's restoration project, the plan introduces a long-term canopy replacement strategy to remove the prevalent invasive vegetation, Norway Maples in particular, and replace them with native, more salt tolerant species to increase ecological resiliency. Further, the plan sets up a protocol for any vegetation removal, to replace any removed vegetation with new plantings for long-term canopy closure. These actions will be carried out indefinitely, throughout all phases of the intervention plan to maintain not just the ecological health and diversity, but also to preserve the "wild," forest experience of the island. To assist in its coordination and logistics, the plan also calls for an establishment of a conservancy or a friends group specific to North Brother that would assume some management roles for the island (helping to form partnerships, raise funds, and engage the public) in collaboration with NYCDPR and South Bronx-based community organizations.

In the initial phases of the plan, efforts and resources will be primarily focused on the built fabric of the Island, to salvage as many historic structures as possible and bring them up to a level of stability and safety. The buildings and structures have been categorized into structures for stabilization,

active demolition, and demolition by neglect. After intensive and thorough documentation, the structures determined for saving will undergo baseline stabilization efforts to extend their building life until necessary funding is acquired for more intense intervention, while buildings determined for active demolition will be carefully deconstructed and materials reused as much as possible. The buildings slated for demolition by neglect, generally located within the buffered heron nesting area or those too far deteriorated to justify for active measures, will be left untouched. Trees deemed hazardous to either buildings or people will be removed and the replacement plan implemented. Full stabilization efforts will be executed on a few structures at a time as required funding presents itself, to bring them a “state of arrested decay,” throughout the intervention plan.

Access to the Island will not be available until at least five years into the intervention plan, at which point New Yorkers will be able to get on the island through the beach area south of the old coal dock. Access will only be granted by permit from Parks/the managing entity and under full staff guidance. Access to North Brother will slowly and deliberately increase in three phases: the first phase limited to the meadows area to accommodate for the ongoing stabilization projects elsewhere on the island, then expanding into the central spine in the following phase, and finally to encompass a broad swath of the island excluding only the eastern and southern ends which have been identified as the protected bird zone. At this final stage, access to the island will be through the stabilized gantry.

Throughout the entirety of the intervention plan, Parks/the conservancy, or a managing entity thereof, would continuously engage with the community at large and expend efforts to acquire funds for the necessary projects. Preference for access would be granted for South Bronx organizations, and for educational purposes. Once the structures have undergone baseline stabilization, the entity will organize stewardship programs to involve the community in the island efforts, such as clearing debris left by Superstorm Sandy, carrying out landscape maintenance, or building deconstruction. This managing entity will form partnerships and build community support for the island, as well as distribute information and provide resources regarding NBI.

By the end of this intervention plan, North Brother Island’s buildings and structures determined for protection will all have undergone full stabilization efforts to maintain a state of arrested decay—still a ruin—while one building, the Shop House, Number 22 on the Island plans, will be adapted for a level of safe reuse if only to provide necessary amenities for the public. Landscape restoration will slowly phase out invasive species and the ecosystem will increase in biodiversity and resilience. The nesting area will remain untouched. Visitors will be allowed to visit during off-season, the non-nesting season, and will no longer be required to acquire permits or move under staff guidance.

We, the 2015 studio, have come to understand our purpose as one creating the next phase in the

evolution of North Brother Island—not simply restoring some lost landscape, nor curating the artifacts of other eras. Our recommendations thus do not include any restoration or reconstruction efforts for the built fabric or the landscape of NBI. While, as preservationists, we recognize and advocate for the retention of historic materials, we also acknowledge that North Brother Island is a dynamic cultural landscape and it is thus illogical to revert the landscape to capture a specific moment of its past. This holistic attitude to the Island’s past and future is also reflected in our adoption of lengthier periods of significance –namely, the periods of inhabitation (1880s-1960s) and of abandonment (1960s-present). Restoring the buildings and landscape to represent a single period would disable the site from communicating the other historic narratives, and from functioning adequately in ecological terms, thereby working against the notion of planning and designing the island’s future as an evolving cultural and historic landscape. Maintaining the buildings as stabilized ruins and valuing both the wildness and the integrity of the natural landscape, will leave the island better equipped to represent a full spectrum of stories and values.

This 20 year intervention plan best reflects our studies and analysis of North Brother Island in its present state: it is realistic and conservative but leaves room for more ambitious projects in the future.

8. Preservation Goals

Immediate Preservation Goals

- Evaluate each structure and determine both the severity of its degradation and the level of its historical significance

- Create a repeatable survey methodology that can guide future preservation decisions.

Study the impact that trespassing and vandalism have had on the ecological and cultural resources on the island and develop a strategy for their protection for and damage mitigation.

- Identify a healthy and sustainable ecology for the island.

- Determine which predators pose the largest threat to the locally protected species, and implement a management plan that will minimize the risk of predation on South Brother and North Brother Island.

- Examine the implications that local and/or national designation would have on the structures in terms of future funding opportunities and protections; determine if designations would be compatible with future plans for the island.

- Consider the desirability and feasibility of creating public access to the island and create an action plan for the future of the island accordingly.

Long Term Preservation Goals

- Explore the possibilities and impacts of varying degrees of access, including a design alternative to access.

- Identify a healthy and sustainable ecology for the island and create a comprehensive ecological management plan, which takes into account predation, reforestation, and invasive species management, accordingly.

- Create a cultural resource management plan that protects and interprets the historical significance of NBI, while remaining cognizant of financial feasibility, accessibility and public desires.

- Identify sources and strategies to finance future plans for the island.

9. Intervention Plan

PHASE I (Present-2 Year)

No access is provided in this phase. The first two years prepares the island for the deconstruction planned in the second phase and future public access. (Figure 1)

Access

1. No Public Access will be provided.
2. Virtual Access will be made possible through website.⁸²
3. Continued harbor patrol presence on water for security.

Buildings

1. Extensive survey of buildings of both interior and exterior conditions. All buildings should include HABS-standard measured drawings in addition to photo documentation.
2. Documentation and cataloging of all material culture (books, furniture, boiler room system, etc.) prior to any physical intervention.
3. Advanced assessment of buffer and risk zones by engineers and other professional.
4. Removal of toxic materials and debris in preparation for building interventions.
5. Full stabilization and reuse of Gantry prior to other construction work on island to provide safe access for construction team and equipment.⁸³

Potential Stakeholder Groups Penn Praxis, HABS, DOB (Tim Lynch, etc.), HRF (for environmental impact), Bronx River Alliance (Water monitoring), Wildlife Conservation Society, NYC Audubon, NOAA, NYC Parks (John Krawchuck?)

Landscape

1. Clear paths, remove debris.

⁸² Yimei Zhang's individual project

⁸³ Evan Oskierko-Jaznacki's individual project

2. Remove concrete sea wall and stockpile its debris for future reuse and begin rehabilitation effort-
sof the remaining structure.⁸⁴

3. Continue NYCDPR's forest restoration efforts.

Management

1. Clearly establish definitive safety boundaries around the nesting area; develop bird monitoring
plan for future check-points; continue monitoring the bird habitat with NYC Audubon.

2. Establish an island-specific friends' group or conservancy to assist in management of the island.

3. Release a Request for Proposal (RFP) to establish a project management team for future phases to
include: Architecture firm, Preservation firm, Landscape Architecture firm and Engineering firm.

4. Acquire generators and compost toilets for electricity and amenities on the island.

Potential Stakeholder Groups: NYC Parks, Coast Guard and Harbor Patrol, NYC Audubon,
NYC Parks, NYC DOB, Army Corp Engineer* (for toxic waste removal)

Community

1. Establish and maintain relationships and partnerships between the island's managing entity and
the community for access and stewardship, etc.⁸⁵

2. Being off-island interpretation, in partnership or cooperation with community groups.

Potential Stakeholder Groups: The Point, Rocking the Boat, Sustainable South Bronx, South
Bronx Unite, Bronx Children Alliance

Funding

1. Identify funding sources; fundraise.

Potential Stakeholder Group: JM Kaplan Fund, NYCEDC, Private Funding, Non-profit Part
nerships, Conservancy-type management

⁸⁴ Angelina Jones's individual project

⁸⁵ Andrea Haley's individual project

PHASE II (2-5 Years)

By the beginning of this phase, advanced assessment of risk zones and buildings would be complete; toxic materials, trash, and necessary paths would be cleared for intervention. The Gantry will be fully stabilized and ready for reuse. Electricity will be provided via generators. (Figure 2)

Access:

1. No Public Access will be provided.
2. Virtual Access will be made possible through website.
3. Continued harbor patrol presence on water for security.

Building

1. Careful deconstruction of Church, Staff House, Boiler Room, Garage, Operation House/Room and the materials stockpiled for reuse, with removal only of debris identified as non-reusable.⁸⁶
2. Baseline stabilization of all buildings excluding the Service Building and three structures in the southern end of the island.⁸⁷ Service Building is excluded as it is currently in a condition that does not require immediate attention and will be re-evaluated in 20 years' time; three structures in the southern end of the island will be left for passive demolition as they are within the protected bird habitat.
 - i. Baseline stabilization includes wrapping buildings, wooden supports, and fencing around all buildings for safety and extension of building life for later intervention.
3. Implementation of interpretive replacement project for the deconstructed Boiler House and the two smokestacks, post-demolition, in the latter half of the phase.⁸⁸

Stakeholder Groups: Army Corp Engineer** (Toxic waste removal, Sea Wall intervention), NYCDOB, NYC Parks (NRG for planning heavy machinery access), historic preservation groups

Landscape

1. Removal of hazard trees.

⁸⁶ Alice Gilmore's individual project

⁸⁷ Jean Jang's individual project

⁸⁸ Julia Griffith's individual project

- i. Long-term canopy closure: any removal of hazard trees must be replaced with new plantings for long-term canopy closure.
 - ii. Structural placeholder: any removal of hazard trees must include intentional re-planting for place-holding, to guard against invasives.
 - iii. Cautious removal: hazard tree removals must be mindful of where roots have grown, especially in regards to building foundations that require repairs and backfilling.
 - iv. Minimal removal: areas defined as character areas (lowest tolerance for change) must limit the removal of trees to those deemed hazardous, to retain its character.
 - v. Canopy replacement plan: develop decadal replacement strategy for gradual phasing out of invasive species, beginning with the Norway Maples in the northern end of the island.
2. Abatement of poison ivy for the next scope of work, clearing safe paths for workers and future visitors.⁸⁹
 3. Incorporate the NYCDPR restoration plans into the larger interpretation efforts, staying mindful of the preservation of view sheds and experiential values.
 4. Continue monitoring nests and forage grounds.

Stakeholder Groups: New Yorkers for Parks NYC Parks, NRG, NYC Audubon

Management

1. Partnership between the Conservancy/Friends' Group and NYCDPR to prepare for initial public access.

Community

1. Begin volunteer stewardship program to engage the community in island efforts: clearing storm debris, assisting in landscape maintenance or building deconstruction.
2. Continue off-shore interpretation efforts with interested community organizations.

Funding

1. Maintain relationships with city agencies for continued endorsement of island projects.
2. Raise equity through stewardship, sponsors, and fundraising.

⁸⁹ Madeleine Helmer's individual project

PHASE III (5-10 years)

All buildings categorized for stabilization have undergone baseline stabilization, all buildings categorized for active demolition have been deconstructed, its materials evaluated for reuse and non-reusable debris removed. The meadows area is now cleared for access. (Figure 3)

Access

1. Access granted to the public through the meadow area during non-nesting season (Mid-September – March) by permit.
 - i. Daytime, fully guided and supervised tour to be arranged by way of the managing entity.
 - ii. Access geographically limited to the Meadows area, as graphically defined in Figure 2.
 - iii. Access point to the island temporarily located at the beach south of the Coal Dock, near Mary Mallon's house site, as represented in Figure 2.
 - iv. No private craft access.
2. Construction teams to access the island through the gantry, where equipment will be loaded.
3. Continued harbor patrol presence on water for security.

Stakeholder Groups: Entity that addresses day-to-day management and security, transportation entity

Buildings

1. Full intervention efforts for stabilization of the Male Dormitory.⁹⁰
2. Continuation of interpretive replacement project of Boiler House from Phase II.⁹¹

Landscape

1. Continue hazard tree removal around buildings during stabilization.
2. Begin implementation of Canopy Replacement Plan developed in Phase II, primarily targeting the Norway Maples at the northern end of the island.
3. Continue clearing paths for public use.

⁹⁰ Casey Weisdock's individual project

⁹¹ Julia Griffith's individual project

4. Continue rehabilitation efforts on the sea wall.⁹²

Management

1. Island staffed all year round, including the no-public-access nesting season, for security, with phone or radio access to mainland.
2. Begin interpretation and public programming efforts both on and off the island.

Community

1. Start educational, interpretation programs on the island for local students.

Funding

1. Maintain relationships with city agencies for continued endorsement of island projects.
2. Raise equity through stewardship, sponsors, and fundraising.

PHASE IV (10-15 years)

Male Dormitory stabilization is completed. The island is accessible during non-nesting seasons, though geographically limited to the meadows area by way of the beach south of the old Coal Dock.

Access

1. Public access available during off-seasons (Non-nesting season: Mid-September – March) in the form of daytime, fully-guided and supervised visits.
2. Managing entity of the island to issue permits for visitors.
3. Access geographically limited to the Meadows area, as graphically defined in Figure 2
4. Access point to the island temporarily located at the beach south of the Coal Dock, near Mary Mallon's house site, as represented in Figure 2.
5. No private craft access at this phase.
6. Continued harbor patrol presence on water for security.

⁹² Angelina Jones's individual project

Buildings

1. Intervention efforts on Store House to bring to a level of reuse.
 - i. To provide a safe, indoor, open-space room with compost toilet and electricity provided via generator.
 - ii. Intervention to be conscious of the building's original use and character, though not necessarily strictly pertaining to the Secretary of Interior's standards of rehabilitation.
 - iii. To be used for education programs/groups.
2. Full stabilization efforts on Nurses' Home.

Landscape

1. Continuation of hazard tree removal around buildings during stabilization.
2. Continuation of canopy replacement plan; Norway Maples to be replaced with salt-tolerant species of similar habits.
3. Continuation of path clearing for public use.
4. Continuation of sea wall rehabilitation and erosion control.

Management

1. Island staffed all year round, including the no-public-access nesting season, for security, with phone or radio access to mainland.
2. Management entity to begin planning and organization process of tours for the public.

Community

1. Strengthen previously established relationships with community groups of South Bronx and the city; continue to incorporate volunteer programs for maintenance of island.
2. Development of interpretation and educational programs for the community at large.⁹³

Funding

1. Maintain relationships with city agencies for continued endorsement of island projects.
2. Raise equity through stewardship, sponsors, and fundraising.

⁹³ Sang Bae's individual project

Stakeholder Groups: Interpretive stakeholders (similar to ACTION, The Point, HSPV groups, Horticultural societies, environmental and ecological groups, artists, educational institutions, etc.)

Phase V (15-20 years):

The Store House is brought up to a state of safe reuse and the Nurses' Home is stabilized. Gantry and Male Dormitory have been completed by the beginning of the previous phases. Access point to the island is still located at the beach south of the old Coal Dock. (Figure 4)

Access

1. Access granted to the public through the meadow area during non-nesting season (Mid-September - March) by permit.
 - i. Daytime, fully guided and supervised tour to be arranged by way of the managing entity.
 - ii. Access point to the island temporarily located at the beach south of the Coal Dock, near Mary Mallon's house site, as represented in Figure 3.
 - iii. No private craft access.
2. Access area now extends from the meadow area to the central spine to encompass the Store House, Male Dormitory, and parts of the forest area in the eastern region of the island.
3. Continued harbor patrol presence on water for security.

Buildings

1. Full stabilization efforts on the Coal House, Morgue, Transformer Vault, Physician's Home, and the TB Pavilion.
2. Storehouse is available for reuse as a visitor center.

Landscape

1. Continuation of hazard tree removal around buildings during stabilization efforts.
2. Continuation of canopy replacement plan; Norway Maples to be replaced with salt-tolerant species of similar habits.
3. Continuation of path clearing for public use.

4. Continuation of sea wall rehabilitation and erosion control.

Management

1. Island staffed all year round, including the no-public-access nesting season, for security, with phone or radio access to mainland.
2. Organized tours available for the public by the managing entity.
3. Additional staff hired as necessary, dependent upon demand for access.

Community

1. Strengthen previously established relationships with community groups of South Bronx and the city; continue to incorporate volunteer programs for maintenance of island.

Funding

1. Maintain relationships with city agencies for continued endorsement of island projects.
2. Raise equity through stewardship and sponsors.

20+ Years

By 20 years, the island will ideally have addressed all pressing issues regarding built fabric and natural features. The intervention efforts for stabilization of Coal House, Morgue, Transformer Vault, Physician's Home, and the TB Pavilion will be completed, and the access point to the island will have moved up north to the Gantry. The ideal, final access area would correspond to Figure 4, including most if not all of the character areas. At this point, access will have phased into non-guided access, though only during supervised, operation hours. Private craft access will be granted, though also limited to operation hours of the island. By this point, strong community relationships will have been established and continued, managing entity of the island clearly identified and staffed, and the Store House occupied (even if seasonally, or only during access hours) by an identified educational program. The established managing entity will also take charge of securing funding and fundraising efforts. Electricity and facilities will still be provided via generators and compost toilets.

At this point, the Service Building should be revisited for an update evaluation and addressed accordingly.

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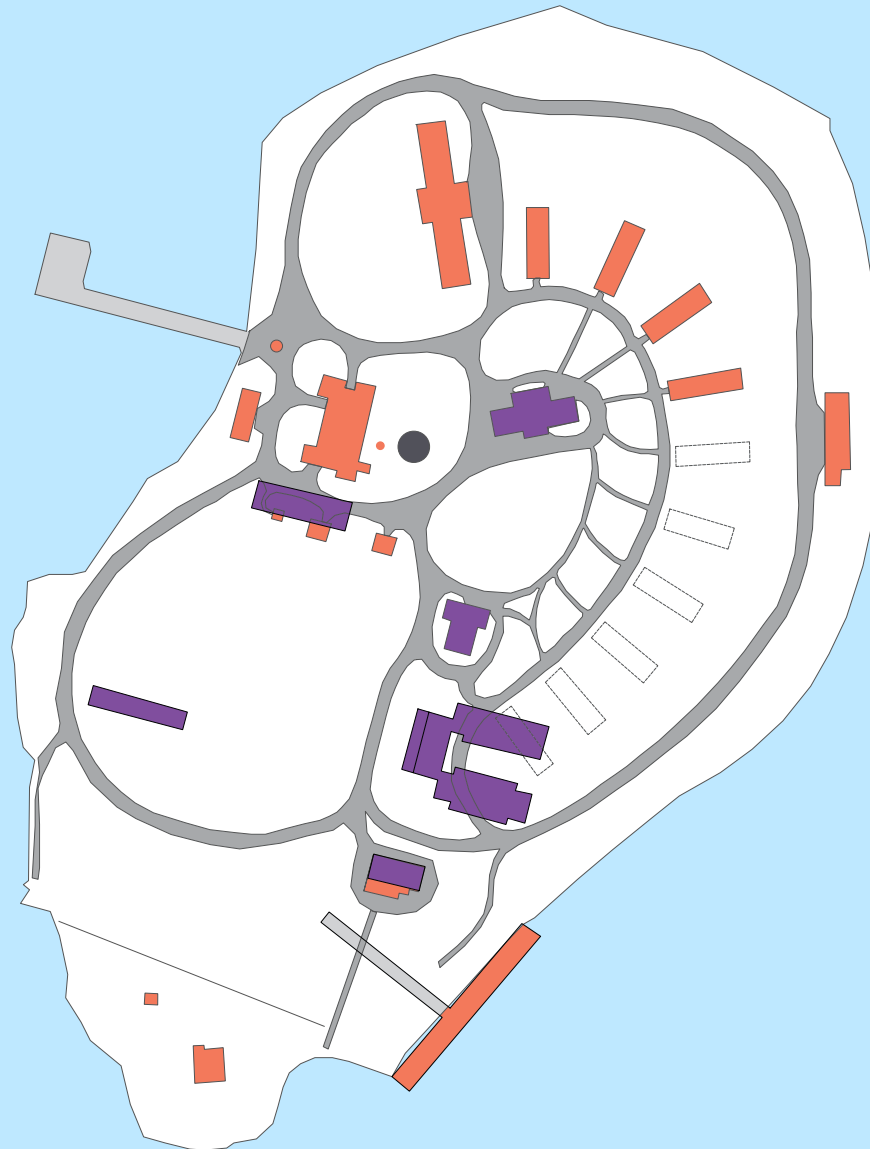
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Appendix A. Evolution Diagram

**NBI EVOLUTIONARY DIAGRAM:
1885-1906**

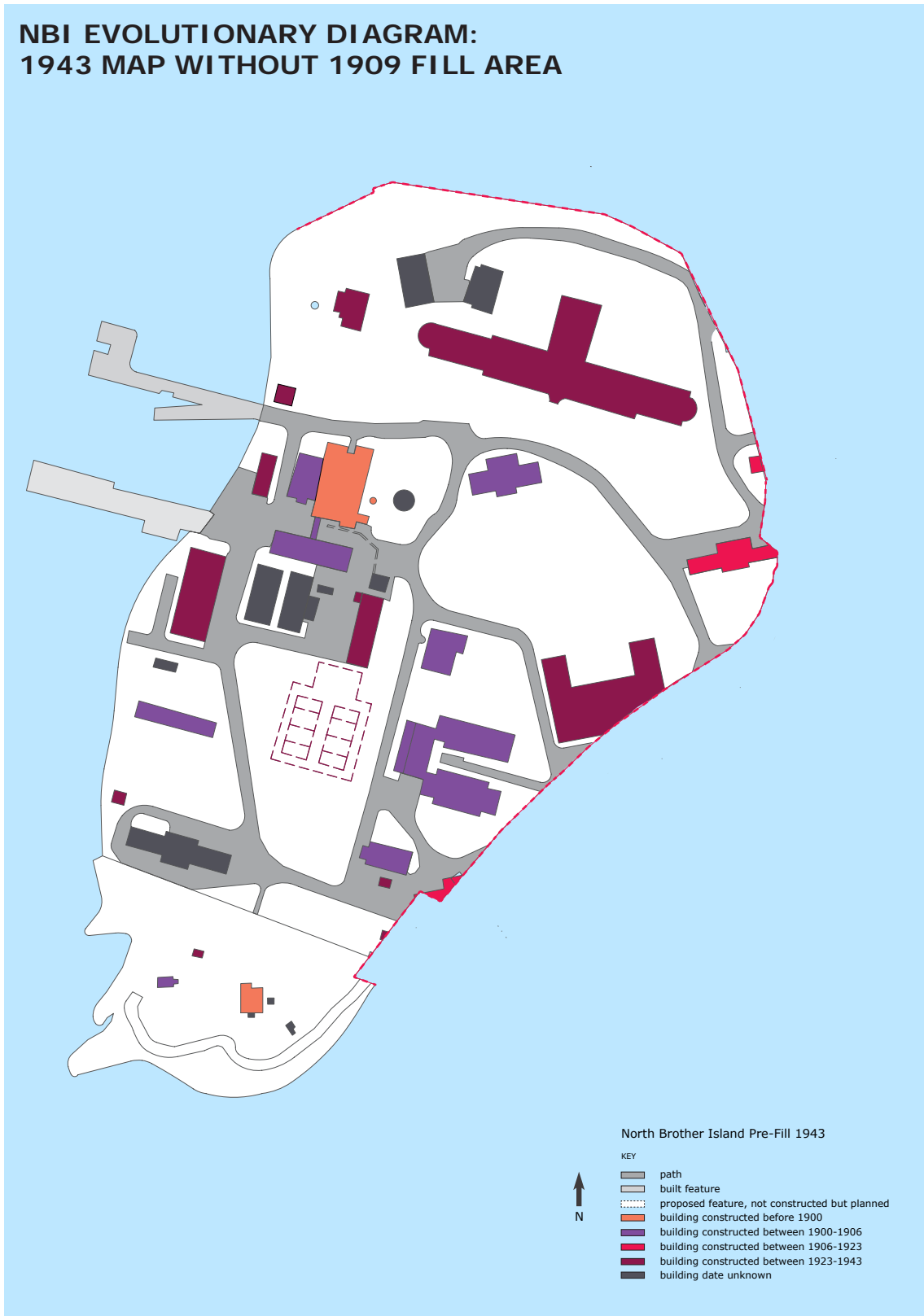


North Brother Island 1885-1906

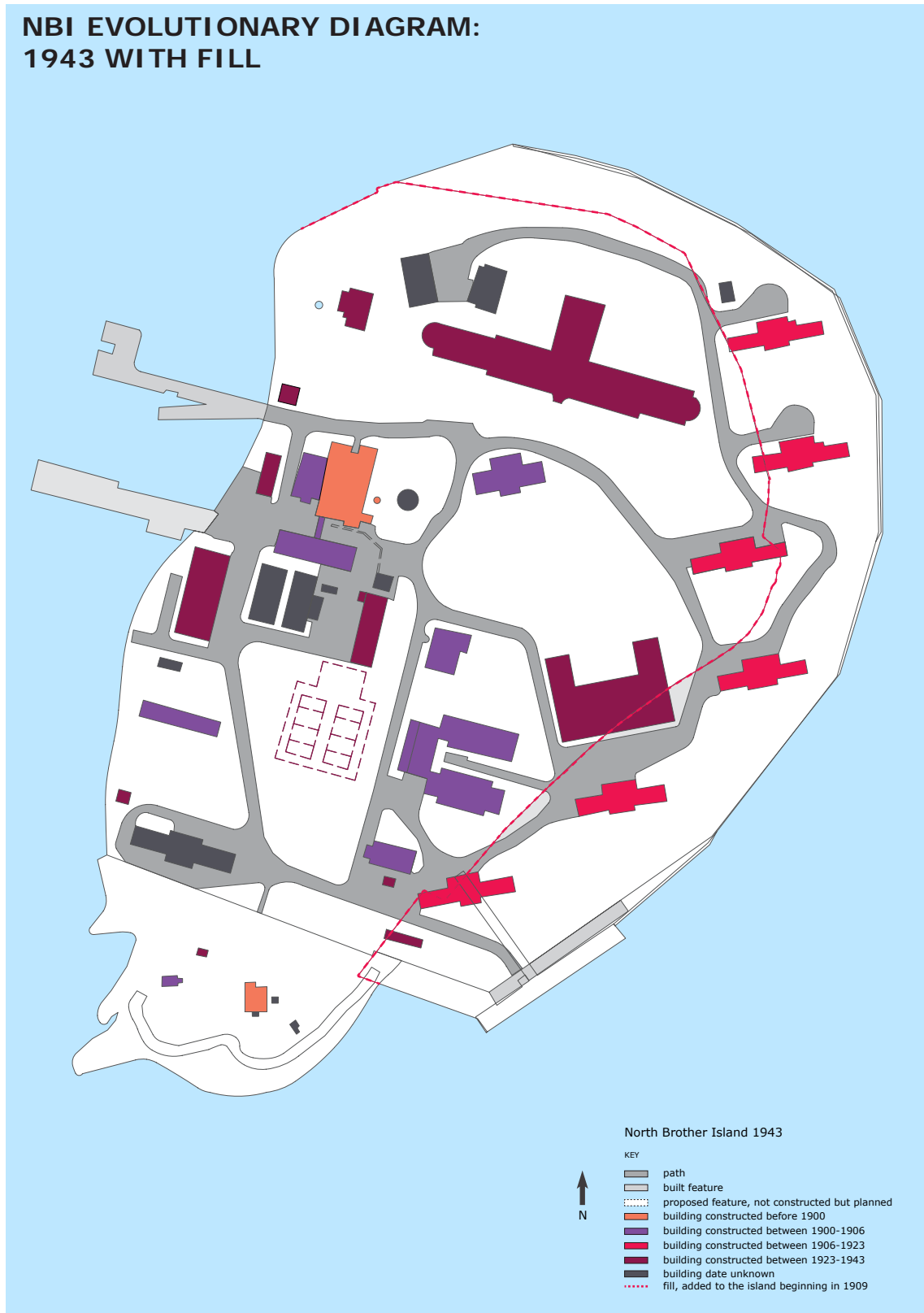
KEY

-  path
-  proposed feature, not constructed but planned
-  building constructed before 1900
-  building constructed between 1900-1906
-  building date unknown

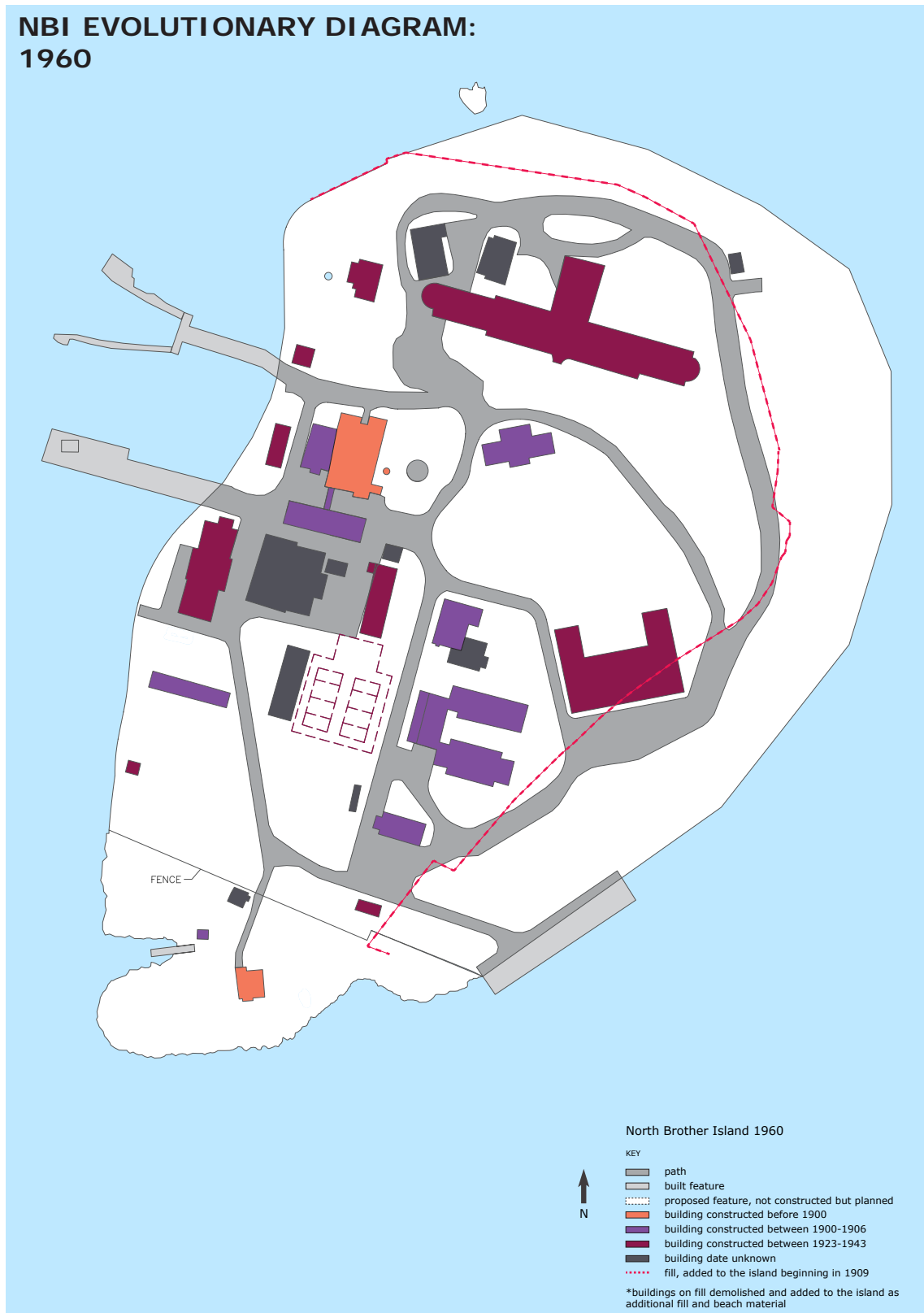
NBI EVOLUTIONARY DIAGRAM: 1943 MAP WITHOUT 1909 FILL AREA



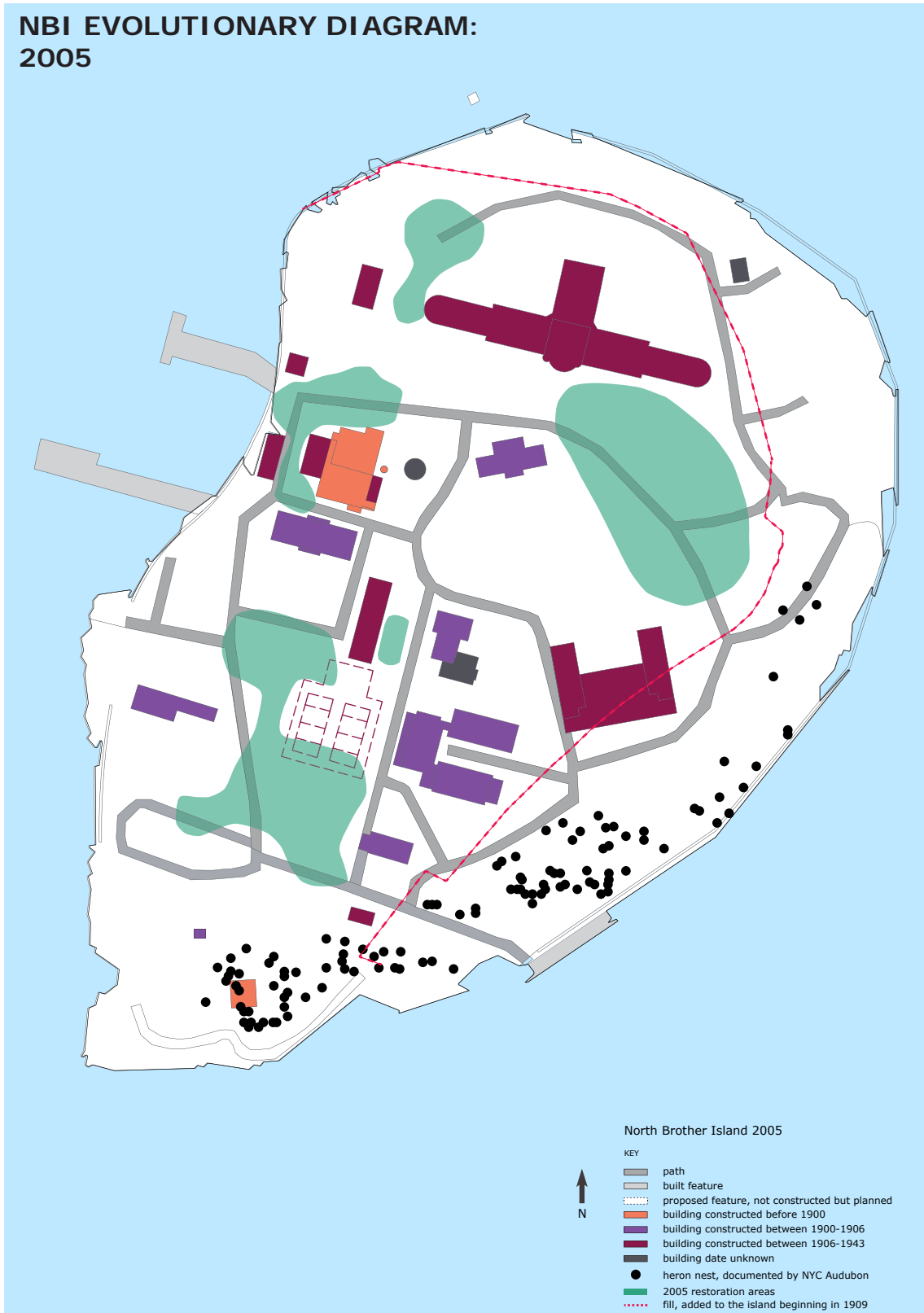
**NBI EVOLUTIONARY DIAGRAM:
1943 WITH FILL**



**NBI EVOLUTIONARY DIAGRAM:
1960**



NBI EVOLUTIONARY DIAGRAM: 2005



Appendix B. Timeline

Building and Environmental Chronology for North Brother Island

Modification of 2005 Studio Timeline

Abbreviations:

CF: Course Folder

Encyclo of NYC: *The Encyclopedia of New York City*

King's: *King's Handbook of New York City 1893*

MM: Molly McDonald

MN: *Medical News*

MRL Notes: *Municipal Reference Library Notes*

MSR: *Medical and Surgical Reporter*

NAR: *The North American Review*

NPG: *The National Police Gazette*

NYCMA: New York City Municipal Archives

NYT: *New York Times*

PJ: *The Phrenological Journal and Science of Health*

Preston: Preston, Thomas D. "Our Hospitals" *Godey's Magazine* (Nov. 1892), 125, 749;
APS Online: 507

Stokes: *The Iconography of Manhattan Island*

T&R: *Times and Register*

WPA: *The WPA Guide to New York City*

Date	Event	Comments	Source	Image	Location
January 17, 1695	North Brother Island is granted to James Graham. - Cal. Coun. Min., 103		Stokes, v. 4, 387		CF/NYPL
1778	Map: Senior's Map of NYC for London Magazine by Thomas Kitchin	Indicates Two Brothers Island	King's, 15	Yes	CF/NYPL
July 18, 1791	Owner Eleanor Brasher is auctioning off the Two Brothers Islands at the Merchants Coffee-House. Advertisement posted on June 29. - Daily Adv. J1 6, 1791		Stokes, v. 5, 1282		CF/NYPL
1869	Lighthouse established on southern end of NBI		http://americanhistory.si.edu/collections/lighthouses/object.cfm?id=70		CF
April 14, 1871	Town of Morrisania purchases NBI from Anna J. and Martha Ackerson for the sum of \$40,000.	The Ackersons had been residing on the island.	-NYT, Feb. 10, 1872, 3 "Westchester Frauds" -Encyclo of NYC, 853		CF CF/NYPL
pre-1872	US Quarantine Station (at Nautilus and Bay Streets) is part of the O'Leary's, a prominent NY family, estate		WPA, 608		CF/NYPL
1872	NYT article refers to "Westchester County Hospital, North Brother Island."		NYT, Feb. 13, 1872, 8 "Long Island"		CF
1872	NYT lists Daniel Kelly as "keeper of the North Brother Island lighthouse."		NYT, February 4, 1872, 6 "Castaway on Ice"		CF
1872	Hoffman and Swinburne Islands artificially constructed to serve as quarantine stations		-WPA, 638 -Encyclo of NYC, 549 & 1146		CF/NYPL

Date	Event	Comments	Source	Image	Location
1877	Board of Health proposes to move the contagious diseases hospital from Blackwell's Island to NBI.	Implementation of the move is hindered because "the island belongs to Queens County, and ...it cannot be used for this purpose without the consent of the authorities of the latter place." The move also requires approval by the Legislature.	NYT, July 17, 1877, 2 "The Board of Apportionment"		CF
1881	Health Commissioners Chandler and Janeway petition the Legislature to allow the island to become, "a station for a hospital for contagious diseases."		NYT, April 3, 1881, 2 "He Will Not Take the Office"		CF
May 3, 1881	New York State Senate passed Bill, transferring jurisdiction of the island from Queens County to New York.		NYT, May 4, 1881, 2 "General Legislative Work"		CF
August 3, 1881	Board of Health visits NBI, with group of officials including city surveyor James E. Serrell and Mr. Haight, an architect who has drawn up plans for the Hospital Buildings.	This article is the first article that identifies Charles Coolidge Haight as the Architect for the Buildings of this phase. Mentions, "spot on northern portion was selected... building will be brick, not over two stories high, and is intended for... small pox. It also proposed to erect hospitals for... typhus..., diphtheria, and other contagious diseases, but... before... the ground will have to be graded and filled in and a sea-wall built around the island. It is expected that the new small pox hospital will be ready for occupancy next spring."	NYT, August 4, 1881, 8 "A Site for Small-Pox Hospital"		Studio Binder
April 19, 1882	Charles C. Haight, the architect, files building plans for a hospital for contagious diseases to be erected on NBI.	"It is to be of brick and stone and, 160 feet front and rear, with a depth of 44 by feet 8 inches. In the rear of this building wards will be erected 32 feet 8 inches in length. The cost of the building will be \$67,000."	NYT, April 20, 1882, 8 "City and Sub-Urban News"		Studio Binder

Date	Event	Comments	Source	Image	Location
1883	Water main to supply fresh water to the hospital is constructed, extending from 138 th Street across the channel to the island.	At 2200 feet long, it is, "the longest water-supply pipe ever laid on the bed of any river in this country."	NYT, November 21, 1883, 8 "A Water Main on a River Bed"		Studio Binder
1885	Map: New York City Robinson Map, Plate 21	Includes building footprints.	NYPL, Maps Division	Yes	CF/NYPL
1885	Sisters of Charity TB Hospital on North Brother Island closes. The City of New York takes possession of the island and builds Riverside Hospital.		Encyclo of NYC, 853		CF/NYPL
July 3, 1885	Hospital System on NBI nearly ready to be occupied. Officials visit, among them Godfrey N. Zingsem, landscape gardener who is to decorate the island.	"The hospital building is of brick, two stories high, heated and ventilated with the most improved appliances ...with a large ward on each floor, lighted on three sides, overlooking each ward is a glass-incased room, the hospital design is to hold 75 patients. The plans call for an 10 additional frame buildings, capable of holding 40 people each, to be used in the case of epidemic, bit only three of these will be built at present. Situated at a convenient distance from the main hospital building, and from the proposed sites of the minor hospitals is the kitchen; a double building...Overlooking the entire island is what is know as the administration building, which will be used as a residence for physicians, nurses and attendants, is a two story brick structure, handsomely finished.	NYT, July 3, 1885, 3 "A New Island Hospital"		CF

Date	Event	Comments	Source	Image	Location
1892	Hospitals seen as solution to societal problems.	“Here the great-hearted benevolence of the big city takes the sufferer by the hand and places him again on his feet prepared to continue the struggle advantageously or, if recovery is impossible, cares for him during the remainder of his days in some pleasant retreat under agreeable surroundings.”	Preston: 507		CF
1892	Map: Survey of North Brother Island	Map includes buildings and descriptions with dimension, number of stories, building materials, some identified with names, and some identified with usage. Indication of utility lines, including Edison Electric line going to Rikers. Shows PHD (Pierhead Line) and BHD lines (Bulkhead line), modified by Secretary of War March 19, 1921. Unsure about Pierhead and Bulkhead lines.	NYCMA: Map S-113	Yes	CF/Research/ MYCMA/S113
Feb. 24, 1892	\$6000 to be spent on new pavilions	Construction delayed due to absence of alderman	NYT Feb. 24, 1892, 6 “Typhus Fever Patients”		ProQuest
Mar. 2, 1892	Patients housed in tents on NBI		NYT Mar. 2, 1892, 10 “Another Typhus Patient”		ProQuest
July 27, 1892	Contract awarded for erecting 2 new hospitals		NYT July 27, 1892, 3 “City and Sub. News”		ProQuest
Sept. 4, 1892	Inspection of NBI	Haste urged in construction of 2 wooden pavilions, 200 feet long, with 2 wards each; may be used for cholera if epidemic occurs	NYT Sept.4, 1892, 2 “Health Board and Police”		ProQuest
Sept 16, 1892	Accommodating the sick from typhus outbreak beginning in February	Steam pipes run from the boiler house to radiators “set out in the field.” Tents built around the radiators	NYT Sept. 16, 1892, 2 “No Danger of an Epidemic”		ProQuest

Date	Event	Comments	Source	Image	Location
Oct. 12, 1892	Beacon light in the water at "North End of NBI" recommended to "mark channel between North and South Brother Islands"	Cost of \$800	NYT Oct. 12, 1892, 11 "Care of Coast Lights"		ProQuest
Nov. 28, 1892	Fire in NBI Reception Hospital	(Hospital at E. 16 th St.) \$200 damage	NYT Nov. 28, 1892, 8 "Small Fire in a Hospital"		ProQuest
Jan. 1, 1893	Finding a place for cholera patients after floating hospital is filled	"Examined the hospital at NBI, where in addition to the main bldgs, are 12 large wooden pavilions (and more are to be erected)" tents also possible	NYT Jan. 1, 1893, 9 "Guards Against Cholera"		ProQuest
Jan. 6, 1893	Available accommodations at NBI - new typhus outbreak	3 portable cottages can hold 35 each; Pavilion 7 will hold forty; 12 steam-heated tents each hold 3, 18 tents ready to put up; 2 pavilions, each will hold forty - steam fitting appliances nearly completed; contract for tent 50x38 feet will hold 35; At present NBI will accommodate 250 patients - in a week, twice that	NYT Jan.6, 1893, 2 "Progress of the Typhus"		ProQuest
Jan. 15, 1893	Frozen water pipe	"The island is supplied from the mainland by a connection made with the water main which runs through 138 th St. Since the freezing of the pipe it has been necessary to take water to the island in barrels by boat. There is a large cistern on the island which is filled every day.."	NYT Jan. 15, 1893, 9 "Typhus Still in Evidence"		ProQuest

Date	Event	Comments	Source	Image	Location
Feb. 19, 1893	Reception Hospital torched	The wooden reception hospital at E. 16 th St. was destroyed to make room for a new building - fire deemed safest way to get rid of it. To be replaced by a one-story glazed brick and iron bldg. 140'x55' containing 12 wards, each 15'x25', and two 30'x27.5'. Also to be built: A boiler house 75'x26' and a 180'x40' bldg. With 4 wards, each 66'x20' on site of old cement shed.	NYT Feb. 19, 1893, 9 "Reception Hospital Burned"		ProQuest
July 11, 1893	New Reception Hospital at E. 16 th St. soon to open	Detailed description of new Reception Hospital in Manhattan. Description of buildings on NBI including square footage: 12 pavilions of varying size, brick hospital, residence for physicians and nurses, administration building, boiler and wash house, disinfecting plant, ice and coal house, barn and greenhouse; all lit with gas and heated by steam, supplied from a central plant also used for laundry. "During the year a disinfecting plant was erected for the purposes of disinfecting by means of hot air all material that had become infected on the island."	NYT July 11, 1893, 2 "Health Department's Pride"	Yes	ProQuest
May 9, 1894	New? Fog bell by May 15, 1894	"The fog bell is now sounded (without change in characteristic) from a white wedge-shaped bell tower, 30 feet high, erected at the shore line to the southward and eastward of the light-house."	NYT May 9, 1894, 6 "Notice to Mariners"	No	ProQuest
July 17, 1894	Dredging of Hudson and East Rivers, etc.	Depth of water around North Brother Island Reef increases from 16 feet to 26 feet - it is not stated where the material from this specific area went	NYT July 17, 1894, 4 "Improving New York Harbor"		ProQuest
Nov.11, 1894	NBI a "well-kept" island	Detailed description of every island in the East River at that time except NBI but still interesting	NYT Nov.11, 1894, 21 "Up Through the East River"		ProQuest

Date	Event	Comments	Source	Image	Location
Aug. 25, 1896	Response to the idea of NBI as a "pesthouse"	It is a "pleasant, breeze swept place, where one might pleasantly spend the period of convalescence in perfect rest and quiet"	NYT Aug. 25, 1896, 8 "Gathered About Town"		ProQuest
April 13, 1901	NBI, Hospital Ward plans filed	One-story frame hospital, 26.4 x 98 feet, Horgan and Slattery, architects, \$10,000, opposite 139 th St..	NYT, April 13, 1901, 11 "Building Dept."		Studio Binder
April 20, 1901	New smallpox pavilion planned for the island.	"The building will be of frame construction, and will cost \$10,000..."	Medical News, April 20, 1901; 78, 16		CF/ ProQuest
September 13, 1901	NBI, Plans for Two Hospitals filed	Two one story frame hospitals, 26 by 98 Horgan and Slattery, architects, \$19,000	NYT, Sept. 13, 1901, 10 "Building Dept."		Studio Binder
March 22, 1902	Private smallpox hospital proposed for North Brother Island		Medical News, March 22, 1902; 80, 12		CF/ ProQuest
August 5, 1902	New boat under construction to provide transportation for patients to and from the island.	The "Claudine" is also equipped with water pumps, so that it may be used to extinguish river front fires, and a large water tank, so that it can provide emergency water supplies to islands when necessary.	Medical News, August 5, 1905; 87, 6		CF/ ProQuest
November 11, 1902	Two one-story hospital buildings planned.	"Plans have been filed with the Department of Buildings for the erection of two one-story frame hospital buildings. The buildings will occupy a site 26x98, and will be known as the Riverside Hospital. They will be used for contagious-disease patients. Each building will cost \$9,500."	Medical News, Nov. 9, 1902; 81,19		CF/ ProQuest
April 26, 1903	NBI, Storehouse plans filed	Two-story frame, on south-side, 102 x 30, Smith, Westervelt & Austin, architects, \$5000	NYT, April 26, 1903, 20 "Building Dept."		Studio Binder

Date	Event	Comments	Source	Image	Location
May 3, 1903	NBI, Alterations to a Disinfecting Station plans filed	One-story brick, 23 x 20, Smith, Westervelt & Austin, architects, \$2500	NYT, May 13, 1903, 41. "Building Dept."		Studio Binder
May 24, 1903	NBI, Storage Building plans filed	One-story brick on north-side, 100 x 35, Smith, Westervelt & Austin, architects, \$12,000	NYT, May 24, 1903, 21 "Building Dept."		Studio Binder
September 16, 1903	New Health Board regime favored over old. Examples of change for the better given.	"The article says that people who came off North Brother Island... declared that it was worse than the Black Hole of Calcutta. It adds: It has been evident for years that North Brother Island has been a name to be dreaded by the poor of this city."	Medical News, Sept. 26, 1903; 83, 13		CF/ ProQuest
November 28, 1903	NBI, Laundry building plans filed	Two-story brick w/attic on west-side, 77.4 x 36, Smith, Westervelt & Austin, architects, \$25,000	NYT, Nov. 28, 1903, 14 "Building Dept."		Studio Binder
June 15, 1904	General Slocum wreck		-WPA, 123 -Encyclo of NYC, 457		CF/NYPL
July 23, 1904	Health Commissioner advertises for bids to build a "rest cure pavilion."	"The pavilion is needed as an adjunct to the hospital for consumptives which has been established, on the island.	Medical News, July 23, 1904; 85, 4		CF/ ProQuest
July 1, 1905	New three-story hospital (Nurse's Home) planned for North Brother Island	"Plans have been filed with the Bronx Building Bureau for a new three-story hospital to be built on the southwest side of North Brother Island. It is to be of ornamental brick, 114 feet long and 73 ½ feet deep, and will cost \$150,000."	Medical News, July 1, 1905; 87, 1		CF/ ProQuest
1906	Map: Theoretical Angles to Locate Corners on Center Line of Stone Embankment Under Construction at NBI	Drawn by Crosby. Shows north end of island with main hospital and three frame buildings.	NYCMA:Map S-109	Yes	CF/Research/ MYCMA/S109

Date	Event	Comments	Source	Image	Location
1907	South Brother Island: House of Colonel Jacob Ruppert burned		MRLNotes, 101 and Encyclo of NYC, 1098		CF/NYPL
January 4, 1909	Enlargement of North Brother Island	About 1,900 feet of concrete retaining wall has been built in the rear of North Brother Island, in a manner similar to that used at Riker's Island (depositing of the City's refuse and made into available land for use); these four acres of made land are designed for the use of the Department of Health	Stokes, v. 5, 2074		CF/NYPL
July 20, 1911	NBI, Alterations to Brick Office Building and Dormitory filed	One and a half-story brick, 59.5 x 92, William E. Austin, architect, \$7, 000	NYT, July 20, 1911, 13 "Building Dept."		Studio Binder
July 2, 1913	NBI, Concrete Hospital Pavilion plans filed	Three- Story Concrete Hospital , 130 x 37, Clinton & Russell and Charles F. Post, architects, \$50,000	NYT, July 2, 1913, 16 "Building Dept."		Studio Binder
July 2, 1913	NBI, Concrete Dormitory plans filed	Four-story concrete dormitory, 115 x 44, Clinton & Russell and Charles F. Post, architects, \$80,000	NYT, July 2, 1913, 16 "Building Dept."		Studio Binder
March 16, 1914	NBI, Two Hospitals plans filed	Two, four-story concrete, 123 x 35.5 each, William E. Austin, architect, \$120,000	NYT, March 16, 1913, 18 "Building Dept."		Studio Binder

Date	Event	Comments	Source	Image	Location
1918	"Federal Government Takes Over North Brother Island"	"Will be used to isolate and treat soldiers suffering with infectious diseases." The island, buildings, and boats were purchased by the War Department. Patients that had been treated on NBI were transferred to Willard Parker Hospital. NBI was transferred to federal ownership for the duration of the war and not to exceed 18 months after the wars end. At that time the island would return ownership to NYC.	Bronx Home News, October 3, 1918		Studio Binder/ NYCMA/MM
Apr. 25, 1920	Riverside Hospital is in danger of closing	The Board of Estimate is said to be meeting this week, and if they do not take favorable action on the pending appropriation for the continuation of the work at Riverside, the hospital will have to close. An appropriation of \$15,000 is expected to continue the work until July 1.	New York Times, April 25, 1920	no	Apr. 25, 1920
1920s	Hoffman and Swinburne Islands abandoned due to curb in immigration		WPA, 608		CF/NYPL
1921	Federal government takes over the US Quarantine Station from New York Stat		WPA, 608		CF/NYPL
Apr. 4, 1922	A fire was reported on North Brother Island	The fire was reported at 11:00a.m., but no information was given as to the loss sustained or who reported it.	New York Times, April 8, 1922	no	Apr. 4, 1922

Date	Event	Comments	Source	Image	Location
July 1, 1923	Improvement and maintenance of New York Harbor and waterways to begin	More than \$8,000,000 was requested for this project, the largest portion (\$3,025,000) going towards the East River from the Battery to Port Morris. Within the current fiscal year beginning July 1 \$500,000 has been spent in the vicinity of North Brother Island.	New York Times, Jan. 7, 1923	no	July 1, 1923
Mar. 20, 1924	A fire was reported at Riverside Hospital on North Brother island	At 1:00p.m. a fire was reported by a person who did not give their name. The loss was listed as "trifling," but no information was given as to which building the fire occurred in.	New York Times, March 20, 1924	no	Mar. 20, 1924
Jun. 8, 1924	Steps toward reorganization of the Institutional Boat Service was recommended	The recommendation was made in a letter to the Board of Estimate, Grover A. Whalen, Commissioner of Plant and Structures. It was suggested to provide "real ferry service instead of the present steamboat service" to islands including North Brother.	New York Times, June 6, 1924	no	Jun. 8, 1924
Nov. 23, 1924	Land acquired for operation of a ferry to North Brother and Riker's Islands	The land between East 134 th and 135 th Streets, which included the old terminal of the North Beach Ferry was recommended to be purchased as the terminal of a ferry to North Brother Island.	New York Times, November 23, 1924	no	Nov. 23, 1924

Date	Event	Comments	Source	Image	Location
Mar. 11, 1925	Unsanitary conditions and overcrowding were found to be a problem at several New York hospitals, including Riverside on North Brother	Members of the Public Health Committee and the Hospital Committee of a Women's City Club made the report. A visit was made to determine the needs of the hospitals before appearing before the Board of Estimate and Apportionment to support the proposal of a \$28,000,000 bond issue to remodel the institutions. The Dept. of Health is asking for \$300,000 for a new kitchen and service building at Riverside. An argument was made saying that lepers were actually Federal patients, and the Federal Gov't should take them instead of Riverside (there were 4 lepers residing in a building that could hold 80 patients). Nothing has come of this request.	New York Times, March 12, 1925	no	
Mar. 4, 1926	Riverside Hospital was found to be in terrible condition	Health Commission Harris condemned Riverside Hospital on North Brother as "positively disgraceful" at a meeting of the New York Visiting Committee of the State Charities Aid Association. He said that this was a result of "a system of afterthought rather than forethought." Some of the problems included buildings with no elevators, "dirty kitchens with adjacent garbage heaps," and the issue of patients having to cross the river in open boats to reach the island.	New York Times, March 5, 1926	No	
Dec. 6, 1926	\$500,000 appropriated towards removal of North Point Reef, North Brother Island, to a depth of 35 feet		New York Times, December 7, 1926	No	

Date	Event	Comments	Source	Image	Location
Nov. 2, 1928	Announcement of \$1,725,000 contract for dredging channel in and around Hell Gate	The article stated that the contract would be awarded "in a few days" and was carrying forward a \$40,000,000 project that was started in 1918 "for the completion of a channel 1,000 feet wide and thirty-five feet deep at mean low water." This included "the dredging of ledge rock and other material from the reef at the north point of North Brother Island."	New York Times, November 3, 1928	No	Nov. 2, 1928
Dec. 13, 1928	Building plans filed for a four story brick hospital pavilion	The City of New York is listed as owner, George M. McCabe as the architect, and the cost is said to be \$240,000	NYT, December 13, 1928, 58 "Building Dept."		Studio Binder
Oct. 7, 1929	A new service building is opened at Riverside Hospital on North Brother	The new bldg. was constructed for \$243,985, and is to replace a structure that has been used for 45 years. It is to house 265 employees of the hospital, and provide dining rooms, dormitories, and a modern refrigeration plant for the hospital.	New York Times, October 6, 1929	No	Oct. 7, 1929
November 10, 1930	1 photo of South Brother (?) by P.L. Sperr	East part of island taken from the Bronx	NYPL, Local History Div.	Yes	CF/NYPL
December 19, 1930	Bids open for remodeling of Old Service Building of Male Dormitories at NBI	Work included general construction, electrical, plumbing, heating	NYT 12.11.1930: 28		CF
Feb. 27, 1931	Bids open for work on Nurse's Home at NBI	Bids received for general construction and electrical work, plumbing, heating, and ventilation, all for construction and equipment for addition to Nurse's Home	NYT 2.19.1931: 22		CF
April 12, 1931	1 photo of South Brother (?) by P.L. Sperr	East part of island taken from the Bronx	NYPL, Local History Div.	Yes	CF/NYPL

Date	Event	Comments	Source	Image	Location
September 18, 1931	4 photos of North Brother by P.L. Sperr	Views of SW, SE, and NE part of island taken from across East River.	NYPL, Local History Div.	Yes	CF/NYPL
October 23, 1931	'Around New York in an Airplane'	Good aerial photograph. Photo taken by Fairchild Aerial Surveys, Inc.	No source given except p. 7 Islands. No. 129 - North Brother Island	Yes	Studio Binder/ NYC-MA/MM
March 9, 1933	Bids open on new disinfector for NBI	"New rectangular disinfector to be furnished, delivered, and installed, including piping work incidental thereto, in the building adjacent to the Laundry at Riverside Hospital, NBI, Bronx."	NYT 3.2.1933: 33		CF
April 23, 1936	NBI, Riverside Hospital, Incinerator plans filed	Plans for 2-story brick incinerator (8x13) filed for NBI. Owner: Dept. of Hospitals, 125 Worth Street, architect: Jacob Lustig, cost: \$3,000	NYT, April 23, 1936, 43 "Building Dept."		Studio Binder/ CF
1937	Map: U.S. Coast and Geodetic Survey (U.S.C. & G.S. 226), published May 1937	Includes building footprints and tidal heights.	NYPL, Maps Division		CF/NYPL
January 6, 1937	4 WPA photos	Nurses' Home, Boiler Room, East Smokestack, and WPA employees working on unknown buildings	NYPL, Local History Division	Yes	CF/NYPL
July 10, 1937	2 images of North Brother by P.L. Sperr	SE and SW part of island from across East River	NYPL, Local History Division	Yes	CF/NYPL
September 23, 1937	School tours of Harbor including NBI	City civics and government students participate in ferry tours around NY harbor, started at the Battery, visited Ellis Island, Statue of Liberty, Buttermilk Channel, the East River, Riker's Island, NBI and various bridges	NYT, Oct. 24, 1937, 37 "School Experiment on Ferry boat Wins Praise of City's Educators"	No	CF

Date	Event	Comments	Source	Image	Location
1938	Hoffman Island becomes the Training School of the US Maritime Service, under the US Coast Guard		WPA, 608		CF/NYPL
February 23, 1938	Addition to Riverside Hospital and improvements to the area around the island	Addition to hospital, now primarily used in treating TB, will expand service to 500 beds. Quote by Dr. S.S. Goldwater, "Although previously some of the surroundings of NBI had been objectionable, the purification of the water about it, resulting from the new sewage disposal plant on Wards Island and from the park-like treatment of...Riker's Island, was changing the surroundings so that the hospital should have a fine site."	NYT, Feb 23, 1938, 23 "New Hospital Unit to Aid TB"	no	CF
1939	NBI is 13 acres. Riverside Hospital has 332 beds		WPA, 426		CF/NYPL
September 9, 1939	City Plans Hospital on NBI, plans filed	Hospital, four-story, Electus D. Litchfield, architect \$850,000	NYT, September 9, 1939, 33 "Building Dept."		Studio Binder
April 23, 1940	Building plans filed for a, "103.6x30, 2-story shop and storage building," at a cost of \$125,000. Architect for project is W.E. Helm.		NYT, April 23, 1940, p. 43.		

Date	Event	Comments	Source	Image	Location
1941	Improvements to NBI in 1941 include, "the erection of a new two-story shop and storage building and a number of other improvements at the Riverside Hospital."		NYT, January 25, 1942, p. RE4.		CF
January 19, 1941	New hospital planned for NBI.		NYT, January 19, 1941, p. 38.	Yes	CF
October 20, 1941	Mayor La Guardia lays cornerstone of Tuberculosis Pavilion.	"The new pavilion will serve as a reception center for tuberculosis admission, as an infirmary for patients seriously ill and as a pre-operative and post-operative service for patients in need of chest surgery...The three-story fireproof, brick building [will] be completed in February. It was begun last March [1940] and will cost \$950,000."	NYT, October 22, 1941, p. 18 NYT, October 21, 1941, p. 25.	Yes	CF
1942	Improvements to NBI in 1942 include, "an addition to the Riverside Hospital."		NYT, January 3, 1943, RE2		
January 18, 1942	Horace B. Collins dies. Collins was an aide to Electus D. Litchfield, and assisted in the design of the Tuberculosis Pavilion.		NYT, January 18, 1942, p. 42.		CF
July 28, 1942	Priority restrictions delay opening of Riverside Hospital.	The new \$1,100,000 building will be three stories high and contain, "a penthouse and basement, facilities for X-ray, pathological, laboratory and other work, and a receiving ward for 150 patients." The building was scheduled to be completed in 1941.	NYT, July 28, 1942, p. 29.		

Date	Event	Comments	Source	Image	Location
March 10, 1943	Building plans are filed for a three-story nurses' home on NBI.		NYT, March 10, 1943, p. 31		
1944	Map: U.S. Coast and Geodetic Survey (U.S.C. & G.S. 226), published December 1941	Includes building footprints and tidal heights.	NYPL, Maps Division		CF/NYPL
	South Brother Island: Colonel's estate sells the island to John Gerosa		MRLNotes, 101		CF/NYPL
April 1944	Riverside Hospital closed by Department of Hospitals.	The hospital closes owing to a shortage of available workers due to the war.	NYT, December 17, 1945, p. 29.		
December 17, 1945	Fifteen hospital-related buildings remain on NBI.	Most are, "old and in run-down condition and are to be replaced with new units," to accommodate student veteran housing.	NYT, December 17, 1945, p. 29.		
1946	"Riverside Campus, home of Island Nursery School."	Southern tip of Island owned by Federal Government the remainder belongs to NYC. NY State leases island from NYC (for \$1/year), and converts it to temporary student veterans housing. Hospital building serves as dorm for single men while other buildings are divided for families. Island cooperative nursery school formed by 10 mothers. State Housing Division in consultation w/ nursery school experts rehab two-story brick building (#11, Male Dormitory). Article includes aerial image of NBI as well as nursery plan.	Stanton, Jessie and Mabel Rossbach Learning by Experience: the Island Nursery School. Riverside Campus: <u>North Brother Island, 1949.</u> <u>Encyclo of NYC, 853</u>	Yes	Studio Binder/ NYCMA/MM CF/NYPL

Date	Event	Comments	Source	Image	Location
January 28, 1946	New York State Division of Housing announces plans to convert closed Riverside Hospital buildings to student veteran housing.		NYT, January 29, 1946, p. 22.		
March 24, 1946	Fourteen of the 33 hospital buildings are planned for conversion.		NYT, March 24, 1946, p. 32.		
July 13, 1946	Architects for veterans' housing project are F.E. Platt & Bros.		NYT, July 13, 1946, p. 28.		
August 27, 1946	Opening of housing project on NBI delayed due to lack of furnishings.	New York State "is spending \$1,200,000 to convert the former hospital buildings on the island, one of which never has been used." Students utilizing housing come from nine participating colleges: Columbia University, Teachers College, Union Theological Seminary, New York University, Fordham University, City College, Cornell University Medical College, New York Medical College and the Juilliard School of Music.	NYT, August 27, 1946, p. 29.		
January 20, 1947	Drexel Furniture Company sells Freedom Oak furniture, a moderately priced line of oak furniture designed exclusively for veterans.	Furniture is designed by Henry Koster and features, "straight lines and smooth surfaces. Drawers are flush with frames of bureaus and desks and have recessed pulls."	NYT, January 20, 1947, p. 28.	Yes	

Date	Event	Comments	Source	Image	Location
February 21, 1947	New York State Division of Housing is providing housing for 213 married couples and 30 single men on NBI.	Single men reside in furnished rooms in, "the converted, brick buildings." The State is planning on increasing housing and adding other improvements, including, "330 apartments, rooms for 411 unmarried students, and various recreational facilities." Facilities on the island include a new grocery store, with 500-capacity cafeteria to open soon.	NYT, February 21, 1947, p. 21.		
August 28, 1947	NBI described as a "grassy, breezy dwelling community"		NYT, August 28, 1947, p. 3.		
October 18, 1947	"A provisional charter for five years [is] granted to Riverside Campus Nursery School, Inc."	The school "will serve the children of veterans... who live in a state housing project for veterans' families.	NYT, October 18, 1947, p. 17.		
September 20, 1948	Improved ferry service to NBI started.	New ferryboat, the Williamsburgh, "will accommodate twenty-five automobiles and 472 persons. Her predecessor, the Greenwich Village, carried four cars and 100 persons."	NYT, September 21, 1948, p. 24.	Yes	
1949	1000 people live on the island.	Island uninhabited except for the Lighthouse during WWII.	Stanton, Jessie and Mabel Rossbach Learning by Experience: the Island Nursery School. Riverside Campus: North Brother Island, 1949.	Yes	Studio Binder/ NYCMA/MM
January 28, 1950	Round trip fare for ferry transportation remains at 10 cents, despite efforts to eliminate fee.		NYT, January 28, 1950, p. 30.		

Date	Event	Comments	Source	Image	Location
June 21, 1951	State lease of NBI expires.	"Buildings are expected to be returned to the city in about three months." Former hospital buildings on NBI considered as possible site for care and treatment of teenage drug addicts	NYT, June 21, 1951, p. 18.		
July 1, 1951	"The Riverside Hospital on North Brother Island in the East River is to be put in use 'at the earliest possible opportunity' for the treatment of youthful narcotics addicts."		NYT, July 1, 1951, p. 1.		
October 26, 1951	Board of Estimate appropriates, "\$513,000 for alterations and equipment of the building on [NBI]... to be converted into a rehabilitation center for teen-age narcotics addicts."		NYT, October 26, 1951, p. 1.		
May 17, 1952	New public school planned for NBI.	P.S. 619 will accommodate 250 students, and will be, "housed in a building directly opposite Riverside Hospital. It is a modern structure that is being altered by the Department of Public Works to meet the Board of Education's requirements. Personnel will include a junior principal, a clerk, four industrial arts teachers and twelve other teachers."	NYT, May 17, 1952, p. 19.		
June 26, 1952	City and state officials tour new hospital facility prior to opening.		NYT, June 26, 1952	Yes	
July 1, 1952	Rehabilitation center for "youthful users of narcotics," opens on NBI.		NYT, July 2, 1951, p. 9.		

Date	Event	Comments	Source	Image	Location
1953	Lighthouse on the southern tip of the island is no longer used.		http://americanhistory.si.edu/collections/lighthouses/object.cfm?id=70		
January 24, 1953	"Narcotics Hospital, Planned for Juveniles, Fails in Effort to Meet Older Patients' Needs"		NYT, January 24, 1953, p. 11.		
1954-55	Map: City of New York department of Public Works, Division of Buildings. North Brother Island, Borough of Bronx for the Department of Hospitals. Demolition of Existing Concrete Buildings and Alterations to Electrical Systems.	Shows detailed electrical plan.	NYCMA: Map S-117	Yes	CF/Research/ MYCMA/S117
1955	Map: City of New York department of Public Works, Division of Buildings. North Brother Island, Borough of Bronx for the Department of Hospitals. Demolition of Existing Concrete Buildings and Re-Alignment of Roadway.	Demolition of Existing Concrete Buildings and Re-Alignment of Roadway. Good details of road and curb. Details for South and East edge of island only. Shows man hole cover and utility tunnels. Some landscaping indicated, for example U.G.A. = undisturbed grass area.	NYCMA: Map S-116	Yes	CF/Research/ MYCMA/S116
1958	South Brother Island: John Gerosa sells island to Manhattan Sand Company		MRLNotes, 101		

Date	Event	Comments	Source	Image	Location
May 2, 1958	"South Brother Island Sold to Manhattan Sand Company"	"John Gerosa, president of the Metropolitan Roofing Supplies Co., Inc., has sold South Brother Island in the East River, midway between 138 th St., the Bronx, and Rikers Island, to Manhattan Sand Co., Inc. Mr. Gerosa was represented by Irving J.W. Marx of Friedman, Marx & Handler, attorneys, and James p. Clark was the broker. The island consists of about seven and one-half acres above water, and about fourteen acres below high-water mark. It was the summer home of the late Col. Jacob Ruppert, and was acquired by Mr. Gerosa shortly after Col. Ruppert's death."	No indication where newspaper article originated. Under Real Estate Section.		No copy made, all text written in chronology
c.1960	Map: Topographic Map of NBI.	"Site for Institution for Female Prisoners". From City of New York Department of Public Works Division of Engineering Services, Topographical Section. Shows footprints of all buildings, paths, and roads, trees,	NYCMA: Map S-111	Yes	CF/Research/ MYCMA/S111
June 1962	North Brother Island, formerly known as one of the Gesellen, is part of the Bronx and contains Riverside Hospital, a treatment center for narcotic addicts. South Brother Island is a part of Queens.	Both North and South Brother Islands were once known as Gesellen, a Dutch name that means companions or brothers.	MRLNotes, 99-101		CF/NYPL
1964	Drug rehabilitation center on NBI closes		Encyclo of NYC, 853		CF/NYPL
1969	Map: Coast and Geodetic Survey Map (C. & G.S. 226)	Includes building footprints and tidal heights.	NYPL, Maps Division		CF/NYPL

Date	Event	Comments	Source	Image	Location
1970	City of New York offers NBI for sale		Encyclo of NYC, 853		CF/NYPL
1971	<p>“Abandoned North Brother Island Has Jewel of a Future”</p> <ul style="list-style-type: none"> -Proposed uses -Past ferry service 	<p>Seagulls nest in buildings. Hospital in 1950’s was PS619 for drug addicted teens. Church of St. John of the Sea in ruinous state. “1948 Dodge rots in the garage of nurses quarters” -“Island overrun by wild plants and small maples.” Lighthouse quarters maintained by USCG but no one lives on the island. EPA places hold on NYC attempt to auction island. Commissioner Jerry Kretchmer asks for delay to study the potential use of NBI as site for disposal plant. Other proposed use is for gambling. Idea includes casino, hotels, and convention center. Ferry service once ran from NBI to College Point, Queens as well as to 134th St in the Bronx. Hydrofoils considered as high speed ferry option as well as footbridge to Bronx. Proposal requires demolition of all buildings and structures.</p>	Sunday News January 17, 1971	Yes	Studio Binder/ NYCMA/MM
1974	<p>“Island Unused for 10 Years Is Still Center of Dispute”</p> <ul style="list-style-type: none"> -Proposed uses -Brief historical overview -Aerial photo of island 	<p>Advocate for visionary plan for NBI as waterfront property is Robert Abrams, Bronx Borough President. Abrams would like island to be an “environmental monitoring station with recreational an parks facilities.” Wild pheasants nesting on NBI. 15 buildings remain and are considered beyond repair.</p>	NYT, July 28, 1974	Yes	Studio Binder/ NYCMA/MM

Date	Event	Comments	Source	Image	Location
February 2, 1976	"North Brother Island for Lease"	"North Brother Island, a 20-acre, city-owned piece of land off Port Morris in the South Bronx that has been vacant for more than a decade, will be offered for long-term lease for commercial or industrial development by private entrepreneurs. Real Estate Commissioner Ira Ducan said the city, which sought unsuccessfully to sell the island five years ago, hopes that 1,000 new jobs would be provided by a business lessee."	NYT, February 2, 1976, 27		No copy made, all text written in chronology
August 23, 1981	'City Seeks Plans for Use of East River Island'	Discusses sale of island. Brief history by Molly Ivan's	NYT, August 23, 1981		Studio Binder/NY-CMA/MM
August 24, 1981	'Promoting an Island Cast Adrift by Time'	Possibilities for redevelopment and request for proposals by Renee Edelman and Mary Ann Giordano	Daily News, August 24, 1981, 31		Studio Binder/ NYC-MA/MM
August 15, 1982	'City Parcels to Bidders with Better Ideas'	Brief history of island. Discusses possibilities for redevelopment. by Dee Wedemeyer	NYT, August 15, 1982, R7	Yes	Studio Binder/ NYC-MA/MM
1984	Prison Plan for NBI	Governor Cuomo proposes NBI prison to replace site in South Bronx. TB Hospital would house some of prison population.	NYT, March 6, 1984	Yes	Studio Binder/ NYCMA/MM
	Prison Plan NBI	Rikers Island escapees occasionally swim to NBI. Ferry dock propositions at 132 nd St, 135 th St, and 140 th St in Bronx.	The Bronx News April 15, 1984	Yes	Studio Binder/ NYCMA/MM
1985	Prison Plan Dropped	Cost too high for prison on NBI	Bronx Press- Review May 16, 1985		Studio Binder/ NYCMA/MM
1987	NBI Photo Exhibition at South Street Seaport	Betsy Tanner and Christina Forbes kayak to NBI and take photos published in Seaport magazine as well as exhibition.	Daily News June 17, 1987		Studio Binder/ NYCMA/MM

Date	Event	Comments	Source	Image	Location
1990	Prison use again	Brief article about second prison plan that was not considered. A brief description of an island visit speaks of 15 building "husks". Brief island history included.	The New Yorker May 14, 1990		Studio Binder/ NYCMA/MM
No date given	"Bronx, Queens Claim South Brother Island; Only Seagulls Inhabit It"	Chronology of S. Brother Island. Manhattan Sand Co. owned in 1958 Article by John McNamara.	Source of article not indicated. Section titled 'Bronx in History'		Studio Binder/ NYC- MA/MM
October 20, 1941	Mayor La Guardia lays cornerstone of Tuberculosis Pavilion.		NYT, October 22, 1941, p. 18	Yes	CF
October 20, 1941		"The new pavilion will serve as a reception center for tuberculosis admission, as an infirmary for patients seriously ill and as a pre-operative and post-operative service for patients in need of chest surgery....The three-story fireproof, brick building [will] be completed in February. It was begun last March [1940] and will cost \$950,000."	NYT, October 21, 1941, p. 25.		CF
1942	Improvements to NBI in 1942 include, "an addition to the Riverside Hospital."		NYT, January 3, 1943, RE2		
January 18, 1942	Horace B. Collins dies. Collins was an aide to Electus D. Litchfield, and assisted in the design of the Tuberculosis Pavilion.		NYT, January 18, 1942, p. 42.		CF
July 28, 1942	Priority restrictions delay opening of Riverside Hospital.	The new \$1,100,000 building will be three stories high and contain, "a penthouse and basement, facilities for X-ray, pathological, laboratory and other work, and a receiving ward for 150 patients." The building was scheduled to be completed in 1941.	NYT, July 28, 1942, p. 29.		

Date	Event	Comments	Source	Image	Location
March 10, 1943	Building plans are filed for a three-story nurses' home on NBI.		NYT, March 10, 1943, p. 31		
1944	Map: U.S. Coast and Geodetic Survey (U.S.C. & G.S. 226), published December 1941	Includes building footprints and tidal heights.	NYPL, Maps Division		CF/NYPL
	South Brother Island: Colonel's estate sells the island to John Gerosa		MRLNotes, 101		CF/NYPL
April 1944	Riverside Hospital closed by Department of Hospitals.	The hospital closes owing to a shortage of available workers due to the war.	NYT, Dec. 17, 1945, p. 29.		
December 17, 1945	Fifteen hospital-related buildings remain on NBI.	Most are, "old and in run-down condition and are to be replaced with new units," to accommodate student veteran housing.	NYT, Dec. 17, 1945, p. 29.		
1946	"Riverside Campus, home of Island Nursery School."	Southern tip of Island owned by Federal Government the remainder belongs to NYC. NY State leases island from NYC (for \$1/year), and converts it to temporary student veterans housing. Hospital building serves as dorm for single men while other buildings are divided for families. Island cooperative nursery school formed by 10 mothers. State Housing Division in consultation w/ nursery school experts rehab two-story brick building (#11, Male Dormitory). Article includes aerial image of NBI as well as nursery plan.	Stanton, Jessie and Mabel Rossbach Learning by Experience: the Island Nursery School. Riverside Campus: <u>North Brother Island, 1949.</u> Encyclo of NYC, 853	Yes	Studio Binder/ NYCMA/MM CF/NYPL

Date	Event	Comments	Source	Image	Location
January 28, 1946	New York State Division of Housing announces plans to convert closed Riverside Hospital buildings to student veteran housing.		<u>NYT, January 29, 1946, p. 22.</u>		
March 24, 1946	Fourteen of the 33 hospital buildings are planned for conversion.		<u>NYT, March 24, 1946, p. 32.</u>		
July 13, 1946	Architects for veterans' housing project are F.E. Platt & Bros.		<u>NYT, July 13, 1946, p. 28.</u>		
August 27, 1946	Opening of housing project on NBI delayed due to lack of furnishings.	New York State, "is spending \$1,200,000 to convert the former hospital buildings on the island, one of which never has been used." Students utilizing housing come from nine participating colleges: Columbia University, Teachers College, Union Theological Seminary, New York University, Fordham University, City College, Cornell University Medical College, New York Medical College and the Juilliard School of Music.	<u>NYT, August 27, 1946, p. 29.</u>		
January 20, 1947	Drexel Furniture Company sells Freedom Oak furniture, a moderately priced line of oak furniture designed exclusively for veterans.	Furniture is designed by Henry Koster and features, "straight lines and smooth surfaces. Drawers are flush with frames of bureaus and desks and have recessed pulls."	<u>NYT, January 20, 1947, p. 28.</u>	Yes	

Date	Event	Comments	Source	Image	Location
February 21, 1947	New York State Division of Housing is providing housing for 213 married couples and 30 single men on NBI.	Single men reside in furnished rooms in, "the converted, brick buildings." The State is planning on increasing housing and adding other improvements, including, "330 apartments, rooms for 411 unmarried students, and various recreational facilities." Facilities on the island include a new grocery store, with 500-capacity cafeteria to open soon.	<u>NYT, February 21, 1947, p. 21.</u>		
August 28, 1947	NBI described as a "grassy, breezy dwelling community"		<u>NYT, August 28, 1947, p. 3.</u>		
October 18, 1947	"A provisional charter for five years [is] granted to Riverside Campus Nursery School, Inc."	The school "will serve the children of veterans... who live in a state housing project for veterans' families.	<u>NYT, October 18, 1947, p. 17.</u>		
September 20, 1948	Improved ferry service to NBI started.	New ferryboat, the Williamsburgh, "will accommodate twenty-five automobiles and 472 persons. Her predecessor, the Greenwich Village, carried four cars and 100 persons."	<u>NYT, September 21, 1948, p. 24.</u>	Yes	
1949	1000 people live on the island.	Island uninhabited except for the Lighthouse during WWII.	Stanton, Jessie and Mabel Rossbach Learning by Experience: the Island Nursery School. Riverside Campus: <u>North Brother Island, 1949.</u>	Yes	Studio Binder/ NYCMA/MM
June 8, 1949	State Division of Housing publishes book on Riverside Campus nursery school.		<u>NYT, June 8, 1949, p. 31.</u>	Yes	

Date	Event	Comments	Source	Image	Location
January 28, 1950	Round trip fare for ferry transportation remains at 10 cents, despite efforts to eliminate fee.		<u>NYT, January 28, 1950, p. 30.</u>		
June 21, 1951	State lease of NBI expires.	"Buildings are expected to be returned to the city in about three months." Former hospital buildings on NBI considered as possible site for care and treatment of teenage drug addicts	<u>NYT, June 21, 1951, p. 18.</u>		
July 1, 1951	"The Riverside Hospital on North Brother Island in the East River is to be put in use 'at the earliest possible opportunity' for the treatment of youthful narcotics addicts."		<u>NYT, July 1, 1951, p. 1.</u>		
October 26, 1951	Board of Estimate appropriates, "\$513,000 for alterations and equipment of the building on [NBI]... to be converted into a rehabilitation center for teen-age narcotics addicts."		<u>NYT, October 26, 1951, p. 1.</u>		

Date	Event	Comments	Source	Image	Location
May 17, 1952	New public school planned for NBI.	P.S. 619 will accommodate 250 students, and will be, "housed in a building directly opposite Riverside Hospital. It is a modern structure that is being altered by the Department of Public Works to meet the Board of Education's requirements. Personnel will include a junior principal, a clerk, four industrial arts teachers and twelve other teachers."	NYT, May 17, 1952, p. 19.		
June 26, 1952	City and state officials tour new hospital facility prior to opening.		NYT, June 26, 1952	Yes	
July 1, 1952	Rehabilitation center for "youthful users of narcotics," opens on NBI.		NYT, July 2, 1951, p. 9.		
1953	Lighthouse on the southern tip of the island is no longer used.		http://americanhistory.si.edu/collections/lighthouses/object.cfm?id=70		
January 24, 1953	"Narcotics Hospital, Planned for Juveniles, Fails in Effort to Meet Older Patients' Needs"		NYT, January 24, 1953, p. 11.		

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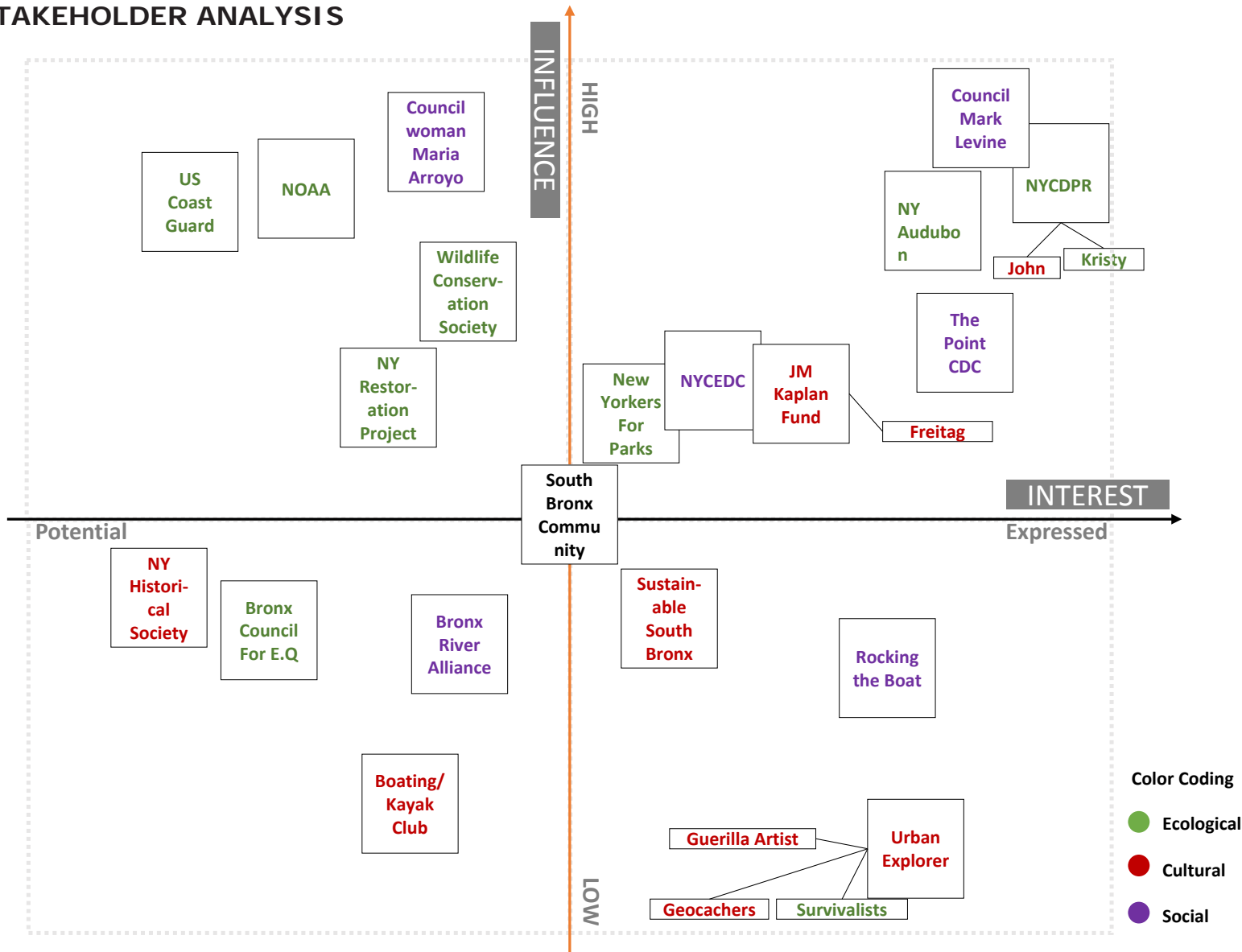
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New York Public Library
ProQuest Article database

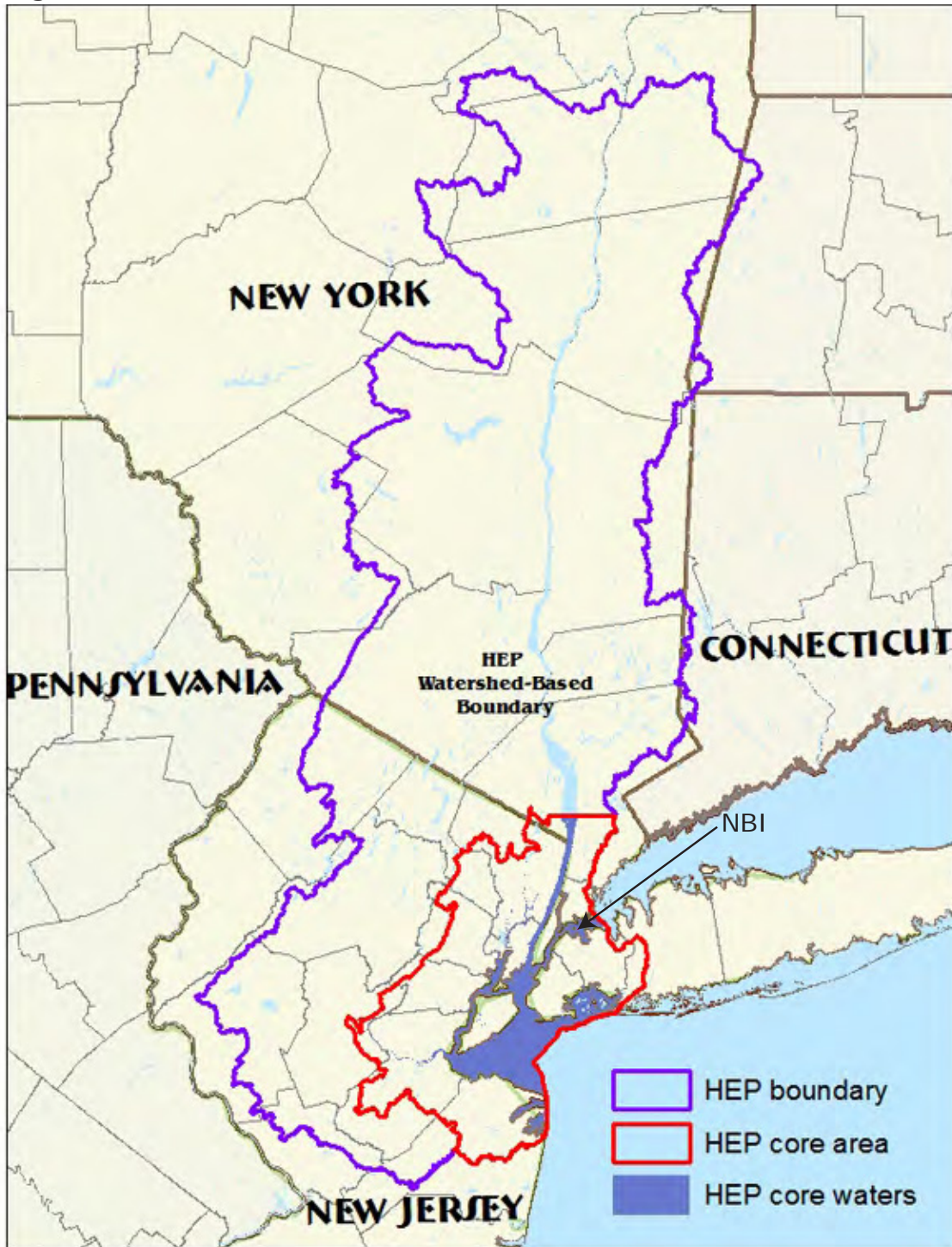
Appendix C. Stakeholder Analysis Tool

STAKEHOLDER ANALYSIS



Appendix D. Figures for
3.2 Enabling Environment: Policies and Plans

FIGURE 1



Geography of NY-NJ Harbor & Estuary Program, <http://www.harborestuary.org/geography.htm>

FIGURE 2

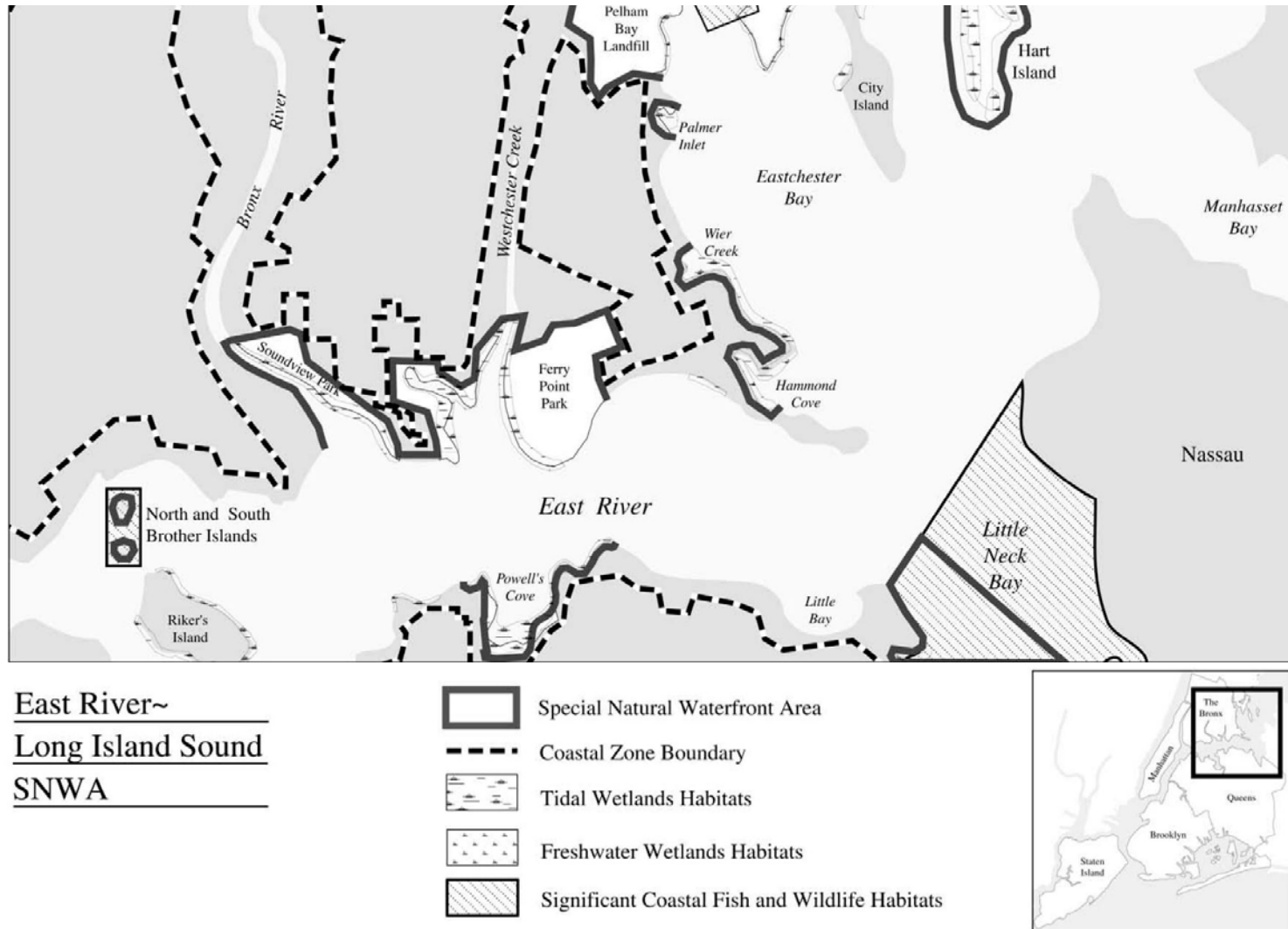
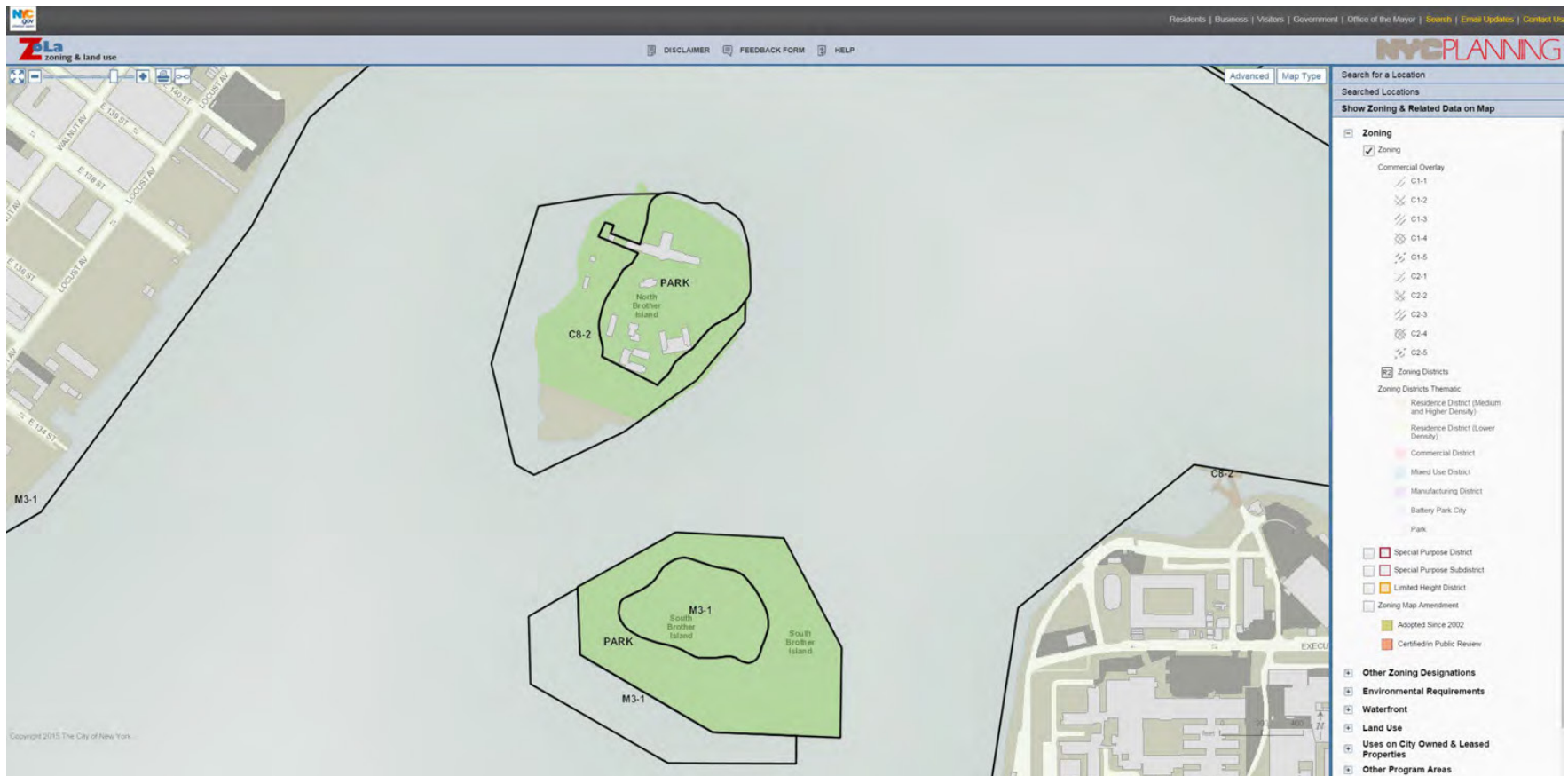


FIGURE 3




Zoning and Land Use Map (ZoLA), New York City Department of City Planning, <http://maps.nyc.gov/doitt/nycitymap/template?applicationName=ZOLA>

Appendix E. Building Survey

E-1. Building Survey Form

BUILDING SURVEY FORM

		HISTORIC PRESERVATION DEPARTMENT SCHOOL OF DESIGN 102 MEYERSON HALL 210 SOUTH 34TH STREET PHILADELPHIA, PA 19104	
NORTH BROTHER ISLAND RAPID CONDITION ASSESSMENT FORM			
SURVEYED BY:		CELL PHONE:	
PRE-EXISTING INFORMATION		BASIC FABRIC INFORMATION	
ID	1	FOOTPRINT	1141
BUILDING	PHYSICIANS HOME	STORIES	1.5
CONSTRUCTION DATE	1936	HEIGHT	0
ZONING	C8-2 COMMERCIAL M3-1 MANUFACTURING NYC PARKS	ELEVATION AMSL	0
		ORIENTATION	
		PROX NEAREST BUILDING	0
		SUBGRADE/BASEMENT	<input checked="" type="checkbox"/>
STANDING 2001	<input checked="" type="checkbox"/>	STRUCTURAL SYSTEM	
NYC PARKS SIGNIFICANT	<input type="checkbox"/>	<input type="checkbox"/> PRECAST CONCRETE <input type="checkbox"/> CONCRETE URM INFILL <input type="checkbox"/> ATTACHED <input type="checkbox"/> STEEL FRAME CURTAIN WALL <input type="checkbox"/> STEEL FRAME URM INFILL <input type="checkbox"/> LIGHT STEEL FRAME <input type="checkbox"/> BEARING URM STEEL/CONCRETE FLOORS <input type="checkbox"/> BEARING URM WITH WOOD FLOORS <input type="checkbox"/> BEARING RM <input type="checkbox"/> WOOD FRAME	
HISTORICALLY SIGNIFICANT	<input type="checkbox"/>		
REUSE POTENTIAL	<input type="checkbox"/>		
NOTES		VEGETATION	
		<input type="checkbox"/> ATTACHED <input type="checkbox"/> SITE <input type="checkbox"/> FREESTANDING	
OVERALL STRUCTURAL HAZARDS		PROX TO NEAREST TREE	
COLLAPSE / PARTIAL COLLAPSE	<input type="checkbox"/>	0	
BUILDING OR STORY LEANING	<input type="checkbox"/>	GEOTECHNICAL HAZARDS	
OTHER OVERALL STRUCTURE HAZARD		SLOPE FAILURE/DEBRIS	
		<input type="checkbox"/>	
		GROUND MOVEMENT/FISSURES	
		<input type="checkbox"/>	
		OTHER GEOTECHNICAL HAZARD	
STRUCTURAL ELEMENTS HAZARDS		NONSTRUCTURAL HAZARDS	
FOUNDATIONS	<input type="checkbox"/>	EPA HAZARD	
VERTICAL LOADS (ROOF/FLOORS)	<input type="checkbox"/>	<input type="checkbox"/>	
COLUMNS/PILASTERS/CORBELS	<input type="checkbox"/>	PARAPETS/ORNAMENTATION	
DIAPHRAGMS/HORIZONTAL BRACING	<input type="checkbox"/>	<input type="checkbox"/>	
WALLS/VERTICAL BRACING	<input type="checkbox"/>	CLADDING/GLAZING	
MOMENT FRAMES	<input type="checkbox"/>	<input type="checkbox"/>	
DECK	<input type="checkbox"/>	INTERIOR WALLS/PARTITIONS	
WATER IN BASEMENT	<input type="checkbox"/>	<input type="checkbox"/>	
OTHER STRUCTURAL ELEMENT HAZARD		ELEVATORS	
		<input type="checkbox"/>	
		STAIRS/EXITS	
		<input type="checkbox"/>	
		ELECTRIC/GAS	
		<input type="checkbox"/>	
		OTHER NONSTRUCTURAL HAZARD	

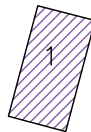
BUILDING SURVEY FORM

Building NO.1

- Physician's House



NOTE



E-2. Building Survey Data

QUALITATIVE BUILDING SURVEY DATA

NORTH BROTHER ISLAND QUALITATIVE BUILDING SURVEY

SITE VISIT 1 ON 10/09/15
 SITE VISIT 2 ON 11/13/15
 FINAL REVISION 12/13/15

ID	BUILDING	JUSTIN SPIVEY STRUCTURAL ENGINEER			TIM LYNCH STRUCTURAL ENGINEER(DOB)			ANDREW FEARON ARCHITECTURAL CONSERVATOR			STUDENT STUDIO 2015			OVERLAY			TOTAL ALL VALUE CONSIDERED SCALE(0-12)
		STRUCTURAL INTEGRITY SCALE(0-1)	HISTORIC INTEGRITY SCALE(0-1)	AESTHETIC INTEGRITY SCALE(0-1)	STRUCTURAL INTEGRITY SCALE(0-1)	HISTORIC INTEGRITY SCALE(0-1)	AESTHETIC INTEGRITY SCALE(0-1)	STRUCTURAL INTEGRITY SCALE(0-1)	HISTORIC INTEGRITY SCALE(0-1)	AESTHETIC INTEGRITY SCALE(0-1)	STRUCTURAL INTEGRITY SCALE(0-1)	HISTORIC INTEGRITY SCALE(0-1)	AESTHETIC INTEGRITY SCALE(0-1)	STRUCTURAL INTEGRITY SCALE(0-4)	HISTORIC INTEGRITY SCALE(0-4)	AESTHETIC INTEGRITY SCALE(0-4)	
		1	PHYSICIANS HOME	0	0	0	0	1	0	1	1	1	1	1	1	2	
2	TRANSFORMER VAULT	1	0	0	1	0	0	1	1	1	1	1	1	4	2	2	8
3	OPERATING BUILDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	TUBERCULOSIS BUILDING	0	0	0	1	0	0	1	1	1	1	1	1	3	2	2	7
5	MORGUE	0	0	1	0	0	0	1	1	1	0	0	0	1	1	2	4
6	BOILER ROOM	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2
7	EAST SMOKESTACK	0	0	0	1	0	0	1	1	1	1	1	1	3	2	2	7
8	COAL HOUSE	1	0	1	1	0	0	1	1	1	1	1	0	4	2	2	8
9	WEST SMOKESTACK	0	0	0	1	0	0	1	1	1	0	1	1	2	2	2	6
10	CISTERN	0	0	0	1	0	0	1	1	1	0	0	0	2	1	1	4
11	MALE DORMITORY	1	1	1	0	1	1	1	1	1	1	1	1	3	4	4	11
12	SERVICE BUILDING	1	0	0	0	0	0	1	1	1	1	1	0	3	2	1	6
13	STAFF HOUSE	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	2
14	NURSES HOME	0	1	1	0	1	1	1	1	1	0	1	1	1	4	4	9
15	CHURCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	SHED	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	3
17	TENNIS COURTS	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	3
18	GOVERNMENT RESERVATION BUILDING	0	0	0	1	0	0	0	0	0	1	1	0	2	1	0	3
19	COAL DOCK	0	0	0	0	0	0	1	1	1	0	0	0	1	1	1	3
20	FERRY DOCK	1	0	0	1	1	0	1	1	1	1	1	1	4	3	2	9
21	GARAGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	SHOP STOREHOUSE	1	0	0	1	0	0	0	0	0	1	1	0	3	1	0	4
23	LIGHTHOUSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	USCG LIGHTHOUSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	WOOD DOCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	SEA WALL	0	0	0	0	0	0	1	1	1	0	1	1	1	2	2	5

QUALITATIVE BUILDING SURVEY DATA

ID	BUILDING	NYC PARKS SIGNIFICANT	HISTORICALLY SIGNIFICANT	REUSE POTENTIAL	SUBGRADE/BASEMENT	EPA HAZARD	COLLAPSE / PARTIAL COLLAPSE	BUILDING OR STORY LEANING	FOUNDATIONS	VERTICAL LOADS (ROOF/FLOORS)	COLUMNS/PILASTERS/CORBELS	DIAPHRAGMS/HORIZONTAL BRACING	WALLS/VERTICAL BRACING	MOMENT FRAMES	DECK	WATER IN BASEMENT	PARAPETS/ORNAMENTATION	CLADDING/GLAZING	CEILING/LIGHT FIXTURES	INTERIOR WALLS/PARTITIONS	ELEVATORS	STAIRS/EXITS	ELECTRIC/GAS	SLOPE FAILURE/DEBRIS	GROUND MOVEMENT/FISSURES	TIM-STRUCTURAL	TIM-HISTORIC	TIM-AESTHETIC	ANDREW-STRUCTURAL	ANDREW-HISTORIC	ANDREW-AESTHETIC	STUDENT-STRUCTURAL	STUDENT-HISTORIC	STUDENT-AESTHETIC		
1	PHYSICIANS HOME																																			
2	TRANSFORMER VAULT																																			
3	OPERATING BUILDING																																			
4	TUBERCULOSIS BUILDING																																			
5	MORGUE																																			
6	BOILER ROOM																																			
7	EAST SMOKESTACK																																			
8	COAL HOUSE																																			
9	WEST SMOKESTACK																																			
10	CISTERN																																			
11	MALE DORMITORY																																			
12	SERVICE BUILDING																																			
13	STAFF HOUSE																																			
14	NURSES HOME																																			
15	CHURCH																																			
16	SHED																																			
17	TENNIS COURTS																																			
18	GOVERNMENT RESERVATION BUILDING																																			
19	COAL DOCK																																			
20	FERRY DOCK																																			
21	GARAGE																																			
22	SHOP STOREHOUSE ICEHOUSE																																			
23	LIGHTHOUSE																																			
24	WOOD DOCK																																			
25	SEA WALL																																			

■ (TRUE)
 ■■■ (FALSE)

Appendix F. Character Defining Elements
with Photographs

THE COAST



Battered seawall and building detritus scattered on the beach with views to Manhattan in the background.



Remnants of the island's infrastructure strewn on the weathered coast



Scrubby brush that is typical along the coastline with old street lamp.

THE MEADOW



Low lying vegetation with large expanses of sky and smokestacks looming above.



Low lying vegetation with large expanses of sky and smokestacks looming above.



Wild flowers and views back to the Bronx.

THE SPINE



Large, handsome building gracefully placed along pathway system.



Large building in close proximity to path other creating a dense urban feel.



Plants and vines covering the built structures

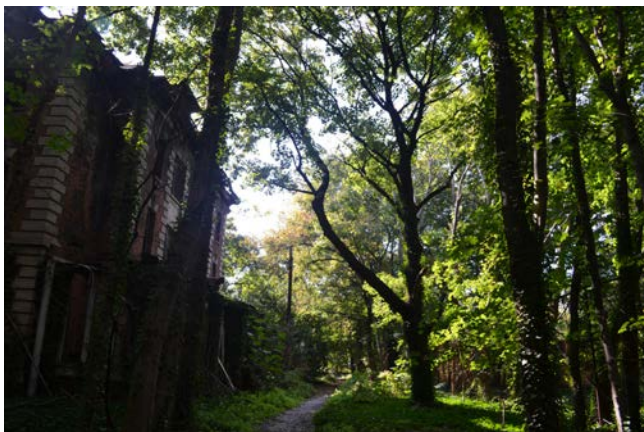
THE SPINE



Vegetation beginning to conceal the island's infrastructure



Dense canopy over head



Tree-lined pathway with closely placed buildings creating a street-like effect

Appendix G. Existing Condition

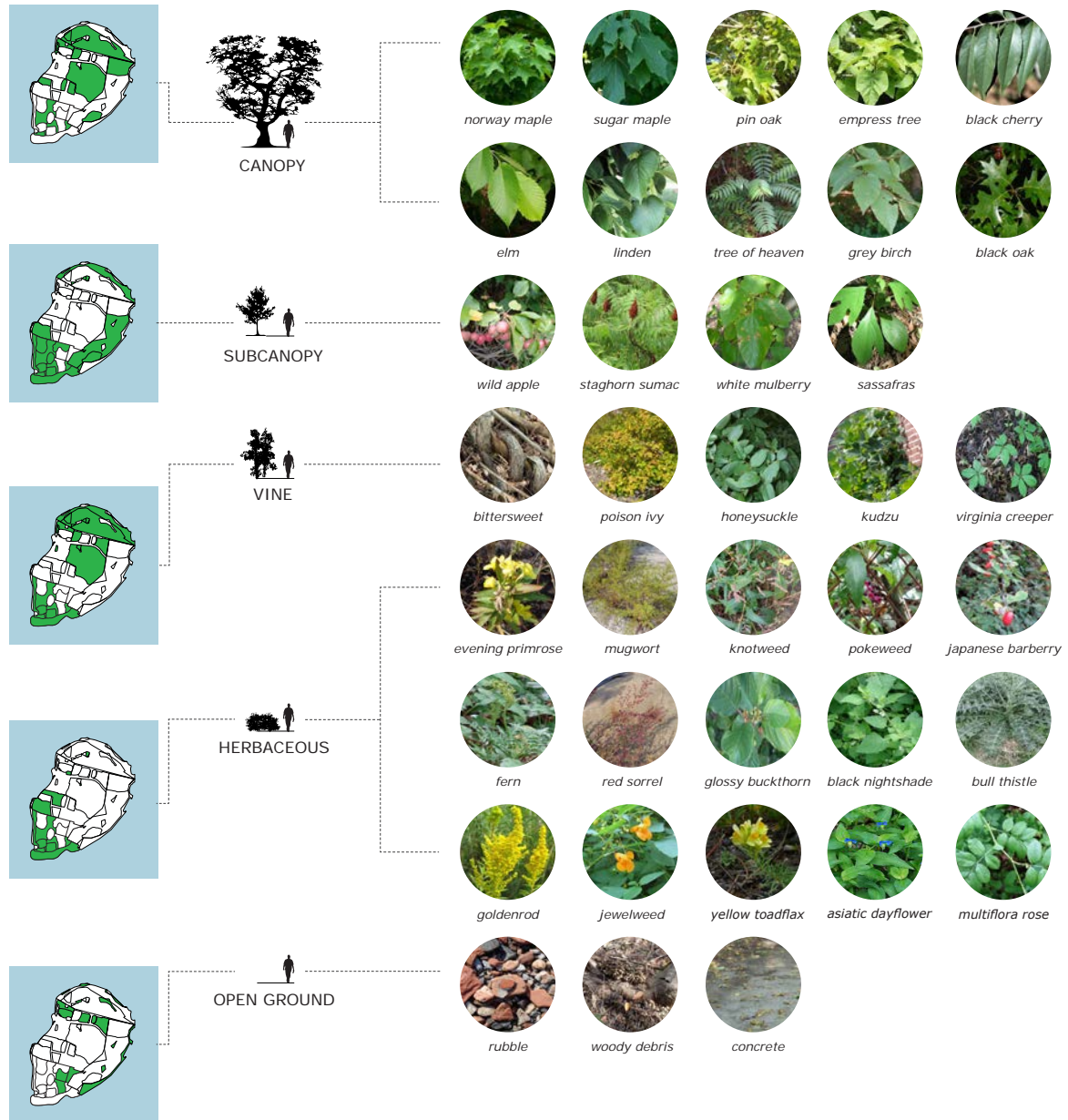
NBI: 2015 LANDSCAPE SURVEY



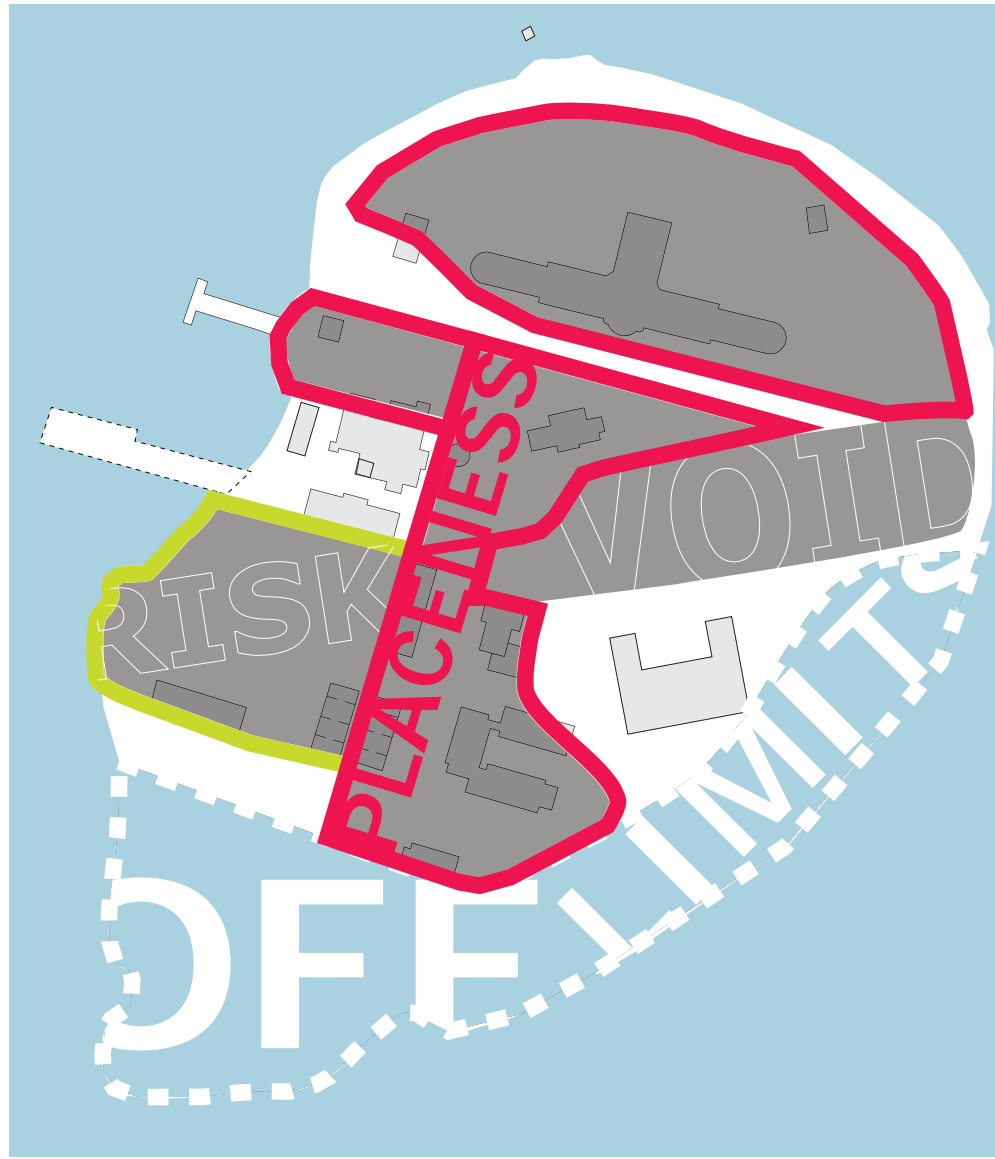
KEY

- | | | | |
|--|-------------------------------|-------------------------|-----------------------|
| | path | 1 PHYSICIANS HOME | 14 NURSES HOME |
| | deteriorated feature | 2 TRANSFORMER VAULT | 15 CHURCH RUINS |
| | built feature | 3 OPERATING BUILDING | 16 SHED |
| | 2005 nesting area | 4 TUBERCULOSIS BUILDING | 17 TENNIS COURTS |
| | restoration areas | 5 MORGUE | 18 GOV. RES. BUILDING |
| | erosion | 6 BOILER ROOM | 19 COAL DOCK |
| | 1909 fill | 7 EAST SMOKESTACK | 20 FERRY DOCK |
| | specimen tree | 8 COAL HOUSE | 21 GARAGE |
| | small scale landscape feature | 9 WEST SMOKESTACK | 22 SHOP/STOREHOUSE |
| | | 10 CISTERN | 23 LIGHTHOUSE RUINS |
| | | 11 MALE DORMITORY | 24 WOOD DOCK RUINS |
| | | 12 SERVICE BUILDING | 25 SEA WALL |
| | | 13 STAFF HOUSE | |

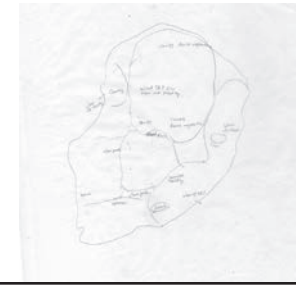
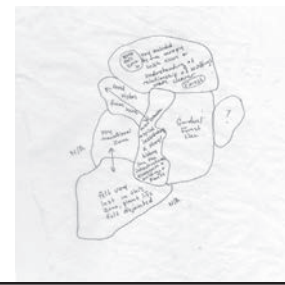
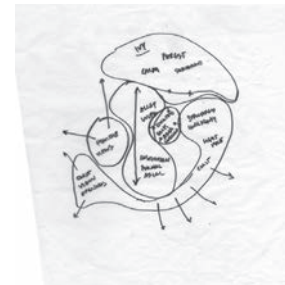
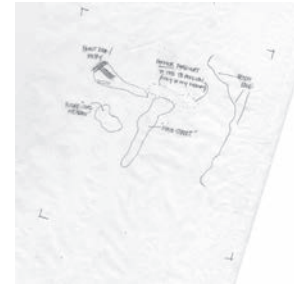
RECORDED VEGETATION PATCHES



ACCESS ANALYSIS DIAGRAM



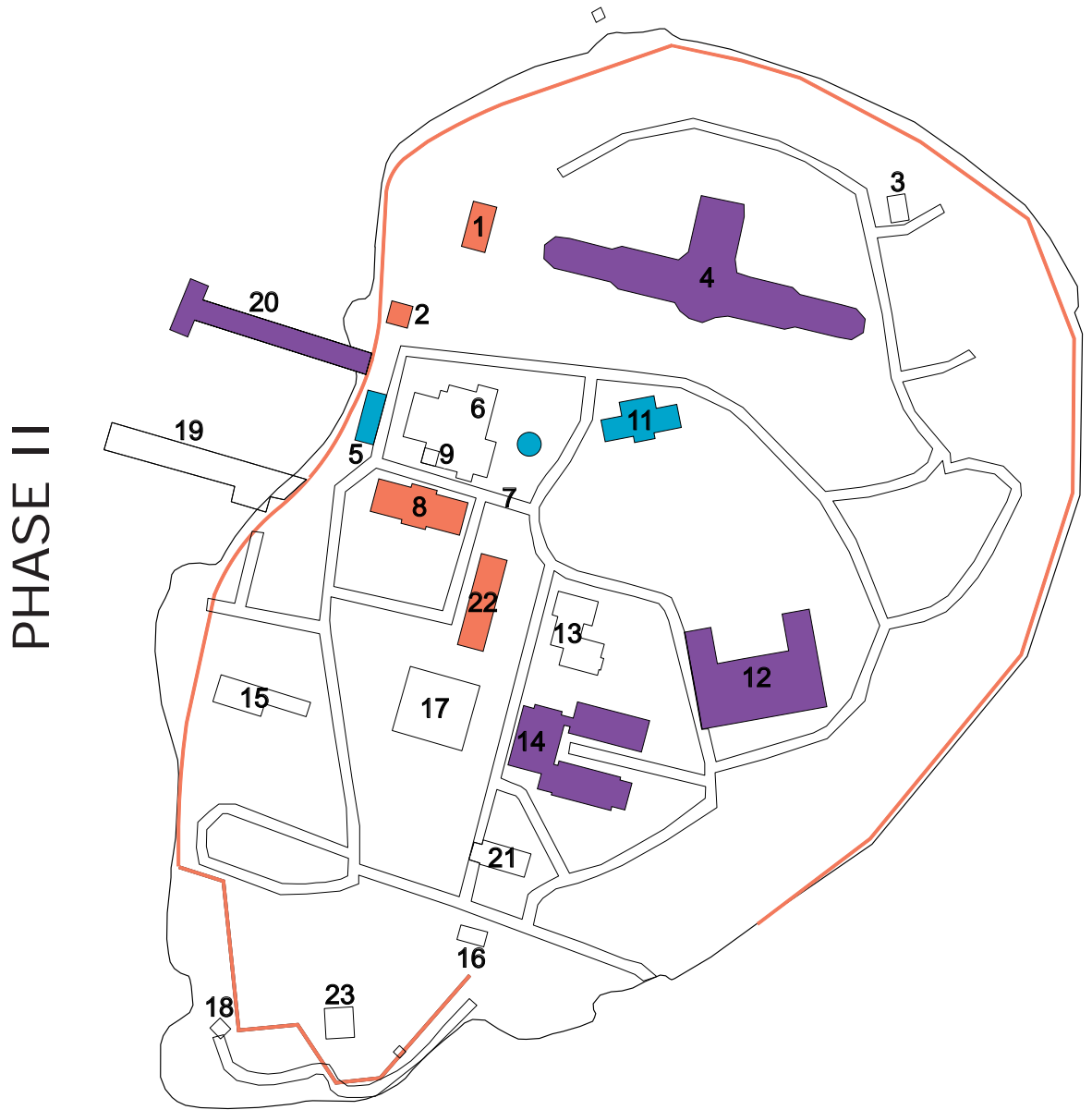
MENTAL MAPS



NBI: 2015 BUILDING SURVEY



NBI: 2015 BUILDING SURVEY



PHASE II

PERIOD OF CONSTRUCTION

- 1943-1960
- 1892-1943
- 1885-1892
- PHASED DEMOLITION

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> 1 PHYSICIANS HOME 2 TRANSFORMER VAULT 3 OPERATING BUILDING 4 TUBERCULOSIS BUILDING 5 MORGUE 6 BOILER ROOM 7 EAST SMOKESTACK | <ul style="list-style-type: none"> 8 COAL HOUSE 9 WEST SMOKESTACK 10 CISTERN 11 MALE DORMITORY 12 SERVICE BUILDING 13 STAFF HOUSE 14 NURSES HOME | <ul style="list-style-type: none"> 15 CHURCH 16 SHED 17 TENNIS COURTS 18 GOV. RESERVATION BUILDING 19 COAL DOCK 20 FERRY DOCK / GANTRY 21 GARAGE 22 SHOP / STOREHOUSE | <ul style="list-style-type: none"> 23 LIGHTHOUSE |
|---|---|---|---|

NBI: 2015 BUILDING SURVEY - QUALITATIVE



Appendix H. Intervention Plan Maps

**FIGURE 1
PHASES ONE AND TWO**

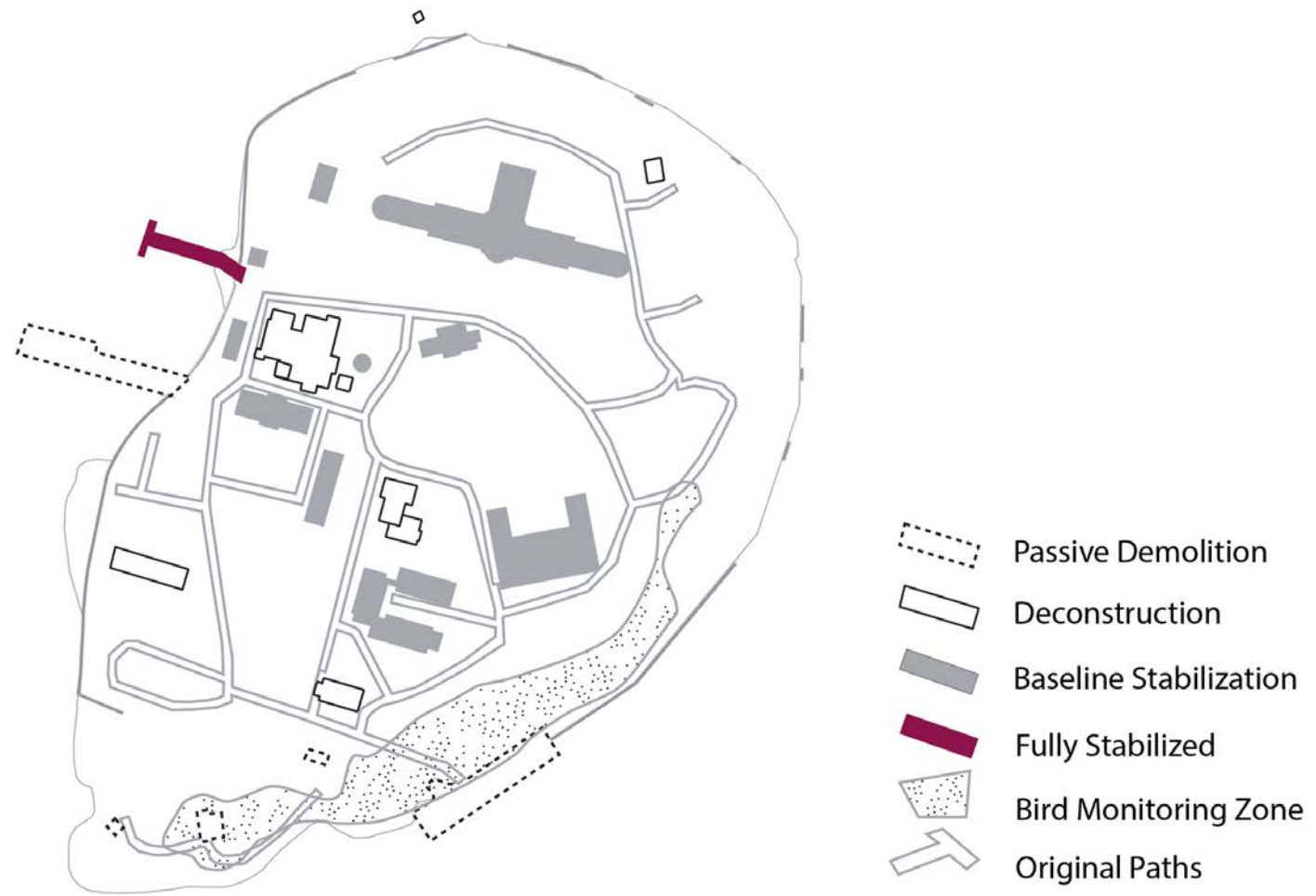
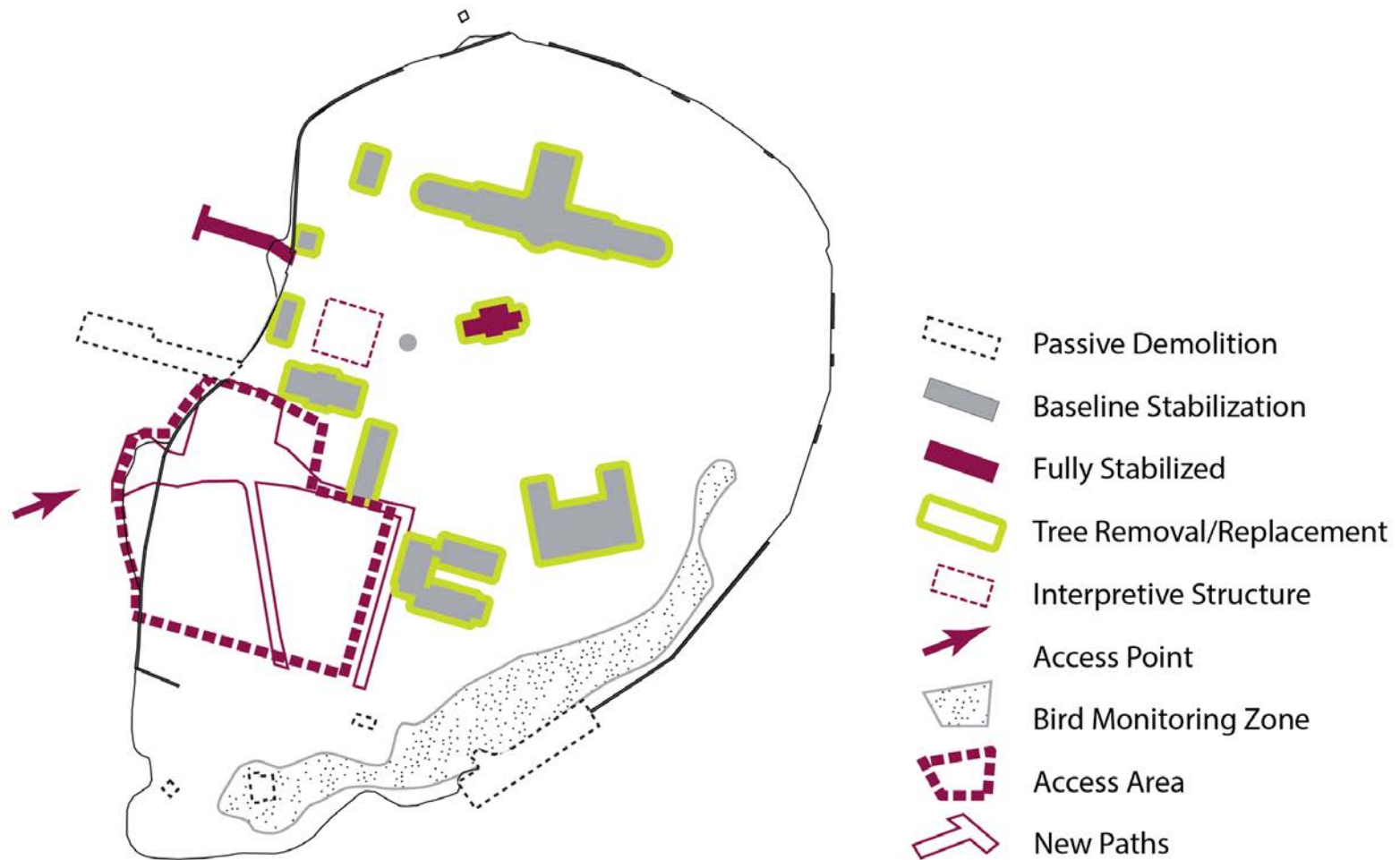
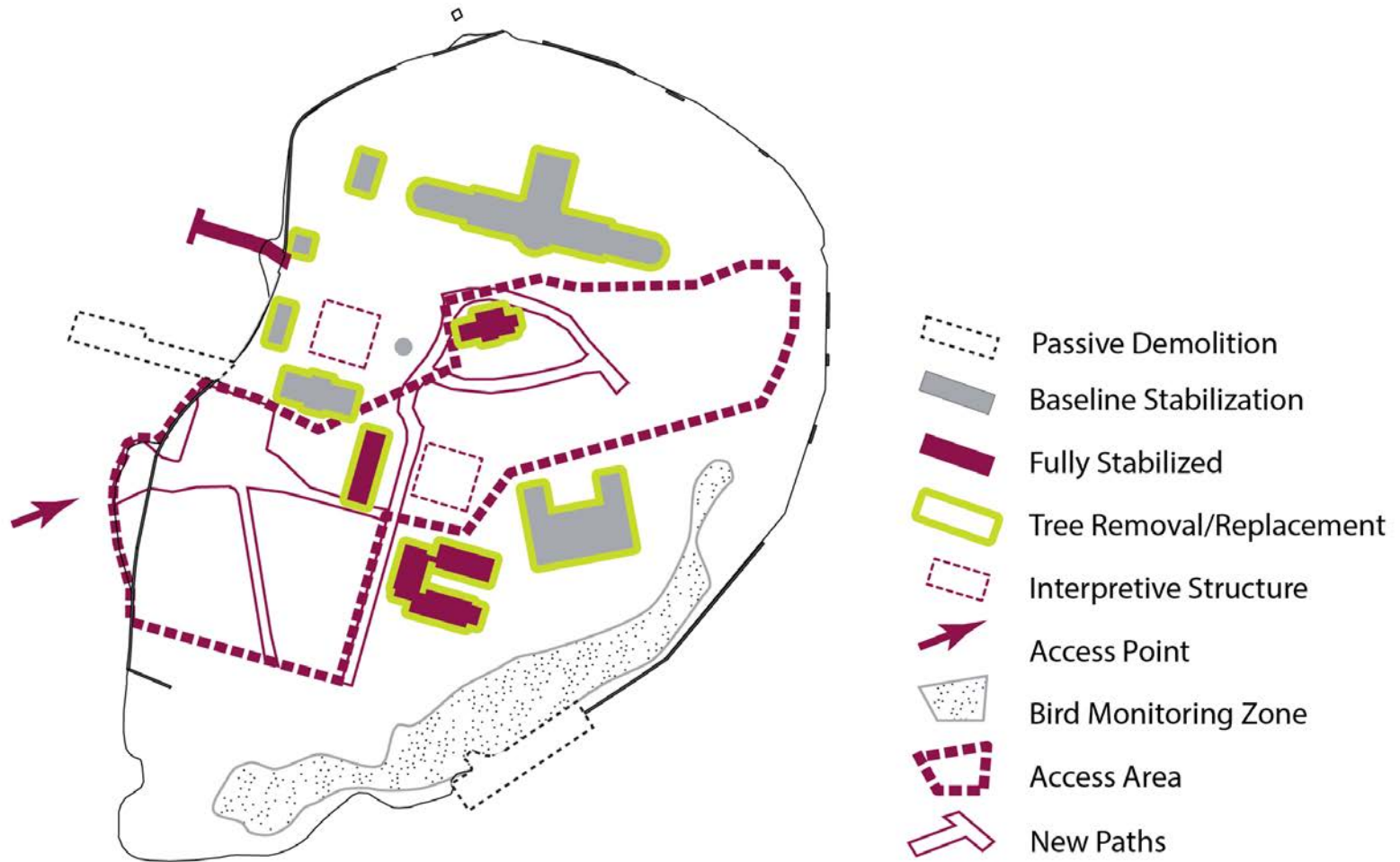


FIGURE 2
PHASE THREE



**FIGURE 3
PHASE FOUR**



**FIGURE 4
PHASE FIVE**

