

Arch 384 Competition Elective

Final Essay

Chicago's Northerly Island Natural Centre

This is the first large scale site planning competition that I attempted and I do not have any previous experiences in designing such a large site. However, this competition is extremely similar to that of the final studio project this term. Both of which design objectives are aiming to redefine the cities' island airport into some kind of parkland. Thus in participating in this competition I would also have the chance to explore ideas that I can expand into my studio final project.

In the beginning of the term I was given the chance to research on the remediation of Fresh Kills Landfill in New York. The Fresh Kills project was initiated by the City of New York in an effort to stop the 50-year dumping on the Staten Island. Field Operation was the finalist in the competition that called for the master planning strategy. The Draft Master Plan offers a framework for development to guide the site's evolution over the next thirty years. To assure that the park's long-range construction does not become a waiting period, but is a time of dynamic change with access to the extraordinary "public space in-process", phasing is choreographed in three ten-year phases.



There are some vital differences between that of the Fresh Kills project and the Chicago's Northerly Island Natural Centre competition. The most dominant being the fact that Fresh Kills Landfill requires a lot more infrastructure and engineering in the earlier phrases to

make public access possible later on. In order for the landfill to safely decompose underground, a man made cover must be placed over the solid waste in phases. The essential design goals are to provide for hydraulic performance, slope stability and long-term integrity or durability of the landfill and its systems. This is achieved by minimizing surface water infiltration, preventing erosion, promoting proper surface water drainage, and separating the waste layer from the environment to protect public health. It also captures and prevents the emission of air polluting gases. Methane gas is to be collected as a source of renewable energy during the decomposition. Thus a large part of the site will have to undergone transformation without any public interaction. Northerly Island on the other hand, does not require such process and its metamorphosis will take place right in front of people's eyes.

The site of Fresh Kills landfill is also much larger than the site of the Northerly Island. Because the landfill is still a part of the Staten Island and connected with the ecosystem of the entire island. Much of the surrounding landscape still contains a wide variety of ecosystem and diverse wild life species. Low lying marshes are one typology of natural ecosystem that coexisted with the landfill. The marshes are home to many migrating and local bird species such as Canada goose, mallard, black duck, blue-winged teal, wood duck, Virginia rail, common moorhen, spotted sandpiper, fish crow, marsh wren, swamp sparrow and etc. Also because Staten Island is farther away from congested human settlement and disruption, there exists a much more balanced living condition

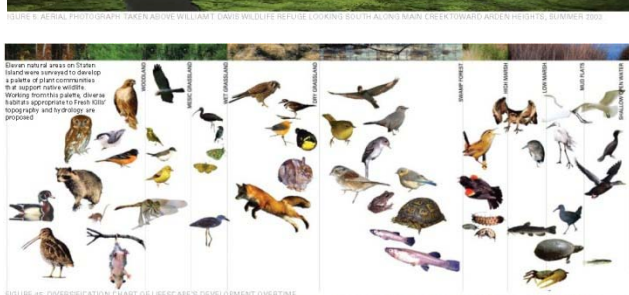


FIGURE 47. EXTENSIVE AREAS OF RECLAIMED AND RE-CREATED WETLAND, GRASSLAND AND WOODLAND

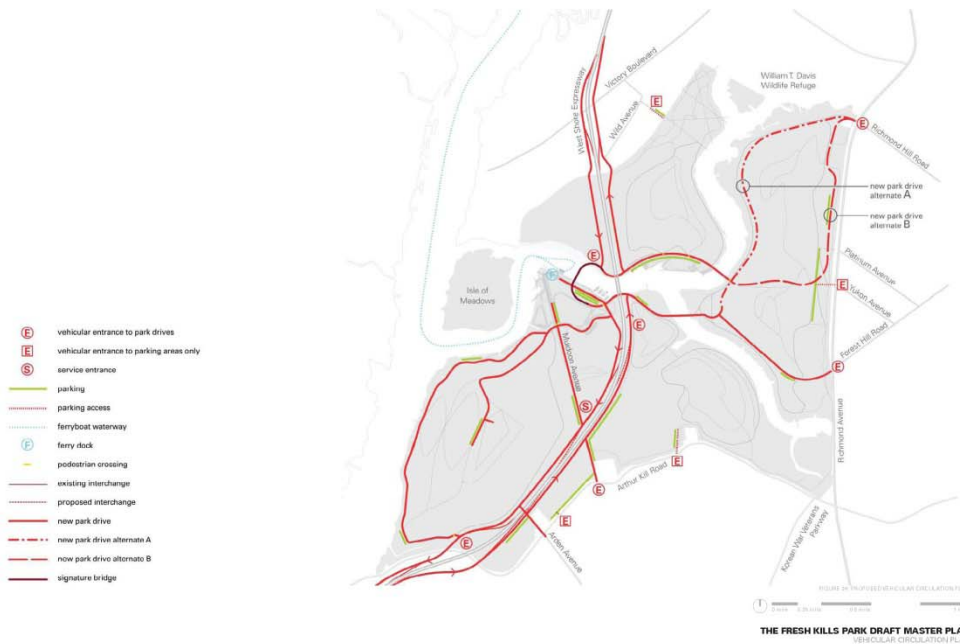
FIGURE 48. ALSO BECAUSE STATEN ISLAND IS FARTHER AWAY FROM CONGESTED HUMAN SETTLEMENT AND DISRUPTION, THERE EXISTS A MUCH MORE BALANCED LIVING CONDITION



for wild life. As the site undergoes continuous transformation, contamination will decrease and allows recovery of the rest of the site. The Northerly Island in respect does not contain such a wide variety of species since the site had always had large human interference. The use of the island as airport took away most of the plantation on the island, leaving no place for animals to reside. The coming and go of airplanes also scared away migrating species and they will only return if the island is to return to a natural state.

At the start of the Chicago Northerly Island competition I thought about the organization principles of the island as being similar to that of Fresh Kills landfill. Both were an ecological process of environmental reclamation and renewal on a vast scale, recovering not only the health and biodiversity of ecosystems across the site, but also the spirit and imagination of people who will use the new park. In essence both projects are looking for the dynamic cultivation of new ecologies over time—ecologies of soil, air and water; of vegetation and wildlife; of program and human activity; of financing, stewardship and adaptive management; of environmental technology, renewable energy and education; and of new forms of interaction among people, nature, technology and the passage of time.

The initial consideration for both projects is public access and circulation. It provides the infrastructure towards future projects and is the initial reaction towards the site. In Fresh Kills, vehicular circulation is accommodated through the construction of seven miles of new park drives. The roads will be designed to provide the needed connectivity and to preserve large open spaces and habitat areas. While the preliminary traffic analysis indicates that the proposed single-lane, two-way drives will adequately serve demand, a roadway system incorporating two



lanes in each direction to provide future capacity for long-term growth will be studied in detail. A signature-design bridge is incorporate in both projects, symbolically becoming the gateway that connects the park to the city.

The parking strategy for Fresh Kills is to disperse the parking at appropriate locations throughout the site, allowing for localized or neighborhood access associated with the many secondary park entrances. These entrances, intended to provide local residents with access to the park by bicycle or on foot, will also provide sufficient space for parking. The lots will be lined with trees to blend into the surrounding natural habitat. For Northerly Island, the parking is allocated underneath a man made mound. This maximizes usable site area and reduces heat island effect and controls runoff.

A variety of paths and trails are incorporated into the park to allow for extensive movement and access to all areas. Many of these paths allow for multiple users (walkers, cyclists, runners, etc.), while others are specifically designated for single use. All paths are separated from roads, with special pedestrian crossings as needed to facilitate safe passage.

There is extraordinary potential at both sites for a wide range of active uses to be set within generous and diverse landscapes: a rich reserve for nature and wildlife, cultural and social life, environmental education and outdoor arts, and active recreation. The sheer size of the site allows seemingly incompatible programs (wildlife habitat and major

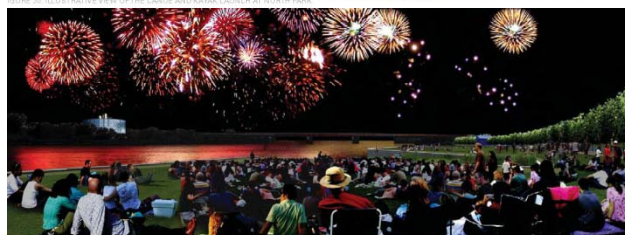


FIGURE 24 ILLUSTRATIVE VIEW OF THE OWL HOLLOW SOCCER FIELD

public gatherings) to coexist. The master planning strategy aims to promote the development of a lively mix of programs by creating extraordinary settings for a wide range of activities. Over time, the parks program will become increasingly diverse and focused as the community and stewardship group adaptively manage the site to suit particular interests and needs.

The huge scale and complexity of the sites' transformation means that the process will inevitably take time. The phasing of the both parks is important. As the initial phase creates a compelling image to the public, it will generate enthusiasm and positive energy towards later projects. It is important that the visitors do not view the park as an endless construction site, thus the site phasing is to create an initial framework of interrelated habitat, program and circulation elements that will clearly define the park's primary special structure, form and character, even though these spaces may be further defined and filled out at a later time.

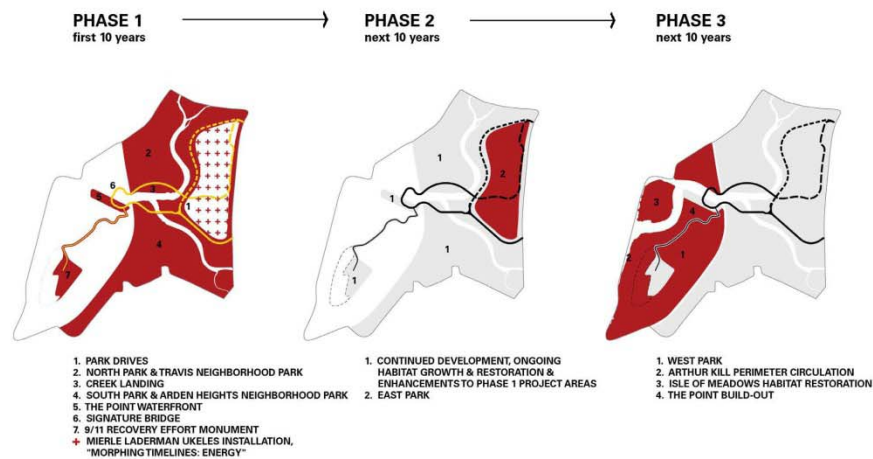


FIGURE 10. PHASING DEVELOPMENT OVER 30 YEARS

IMPLEMENTATION  
2017-2020

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The research for the Fresh Kills landfill competition provided me insights and the underlying guideline towards the Chicago Northerly Island competition as well as the studio final project. It also proved to be a very appropriate introduction to large scale site design as well as design for important environmental concerns.

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## Bibliography

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[http://www.nyc.gov/html/dcp/html/fkl/fkl\\_index.shtml](http://www.nyc.gov/html/dcp/html/fkl/fkl_index.shtml)