



PHOTOGRAPHER: TSE-HUI TEH / COLUMBIA UNIVERSITY

4.0.01 FLOYD BENNET FIELD HORIZON, 2006

4.0 DETAILED VIEW OF FLOYD BENNETT FIELD



4.0.02 FLOYD BENNETT AIRFIELD

4.0 DETAILED DESCRIPTION OF FLOYD BENNETT FIELD

Floyd Bennett Field is 1,358 acres, which is a little more than 1.5 times the size of Central Park. It represents 20 percent of all the land area of Gateway. Its area encompasses the original airfield, Dead Horse Bay, Gateway Marina and the Gateway Driving Range. Once a collection of small islets, it has been progressively filled in since the 1800's and is now a peninsula. In many ways Floyd Bennett Field represents a microcosm of the possibilities of Gateway.

What is now Floyd Bennett Field was originally known as Barren Island. The island was first inhabited by Europeans. These early settlers took advantage of the fact that it was one of the largest and highest islands within Jamaica Bay. They were also attracted to this area because it was accessible from the mainland during low tide, and its shores could be navigated by larger vessels on the southern edge and smaller vessels in the north. Before becoming Floyd Bennett Field the area was the site of several refuse reclamation and horse rendering factories. Now it is primarily known for being New York City's first municipal airport and playing a crucial role in the delivery of airplanes for the U.S. Navy in WWII.

Today, Floyd Bennett Field is the site of the principal Gateway visitor center, the "William Fitts Ryan Visitor Center," which is housed in the airport's original air control tower and administration building. The Jamaica Bay Unit headquarters and the Jamaica Bay Institute and Library are also located on Floyd Bennett Field.



4.0.03 AIRPLANE HANGAR AT FLOYD BENNETT FIELD, 2006

PHOTOGRAPHER: TSE-HUI TEH / COLUMBIA UNIVERSITY



4.1.01 MODEL AIRPLANE HOBBYISTS, 2006



4.1.02 MOTORCYCLIST, 2006

4.1 Activities and Programs

Floyd Bennett Field's former land use as an airfield has resulted in a relentlessly flat topographic condition, which is disorientating and spatially monotonous. However, this flat surface has become a meeting area for a diverse array of informal programs and has been used for parasailing, bike racing, model airplane flying, and archery. It plays host to a vast number of hobbyists, preserves important cultural assets, and helps to conserve a formerly estuarine environment that is surrounded by the dense urban areas of Brooklyn.

It also serves as a staging ground for numerous "back of house" municipal functions. Cooperative agreements allow four government agencies to use the land and structures within Floyd Bennett Field (FBF). The agencies include the New York City Department of Sanitation, which stores sanitation vehicles and has a driver's training facility there; the Metropolitan Transit Authority (MTA) and the New York Police Department (NYPD) also provide driver training at FBF; the NYPD has a base for its aviation unit, emergency services, and special operations; and the U.S. Marine Corps has a base on FBF for the 6th Communication Battalion. Airship Industries also launches skyships from the seaplane ramp at FBF and is in negotiations for a new landing area there.

FBF also provides space for educational institutions. It has a teacher training facility run by the NYC Department of Education and a center for team building and outdoor education for Outward Bound. The Polytechnic University of New York has its soccer, baseball and softball fields in FBF; and Beach Channel High School has its boat storage and crew practice area there. The NPS has also provided an educational campground, Ecology Village on FBF since the late 1970's.

FBF is also home to a multitude of hobbyists, both formal and informal. They utilize this open space to pursue interests that are not possible to perform in a city as densely populated as New York. The more formal hobbyists have clubs and must obtain a special permit from the NPS and sometimes build structures for their activities. Among these are the Pennsylvania Avenue Radio Control Society, which has a model airplane field; the Remote Fanatic Racers which has a model car race track; the Floyd Bennett Garden Association, which has the largest community garden in New York City; the Historic Aircraft Restoration Project, which is managed by the NPS and restores antique airplanes within one of FBF's hangars; Friends of Gateway, which has a greenhouse education

center for the growing of trees and plants that will be replanted in urban areas; and the Floyd Bennett Cricket Club maintains a pitch at FBF. There is also an archery range at FBF maintained by the NPS, which is well used but not associated with a formal club.

Beyond the club activities there are also many informal activities at FBF – including land sailing, camping, bird and butterfly watching, star-gazing, radio relaying, canoeing, fishing, cycling, inline skating, motorcycling, walking on nature trails, flying kites, and archery. FBF is also the site of three important concessionaires that add more recreational facilities: the Gateway Marina; the Gateway Driving Range; and the recently opened Aviator Sports and Recreation Complex.

People are also attracted to numerous opportunities this piece of land offers. Most of the visitors to FBF are United States citizens; of these visitors, 96 percent were from New York, 1 percent from New Jersey, 1 percent from Puerto Rico and the remaining 2 percent from other states. Fifty-three percent of these visitors came to the park at least once a week, 21 percent visited daily and 16 percent visited once a month. Fifty percent of visitors who returned a questionnaire for the visitor study done by the University of Idaho’s Park Study Unit in 2003, had spent 1-4 hours in the park on this visit. The survey shows that this national park also has very local uses.¹

While there are a multitude of activities in FBF, 30 percent of those surveyed were going fishing; 27 percent jogging, walking or hiking; 24 percent gardening; and 23 percent flying model airplanes. These people came to FBF to enjoy the open space, the peace, the natural views, to pursue hobbies and to relax.² FBF is also host to four important annual events: the Gateway to the Nations – New York City Native American Heritage Celebration also known as Pow Wow, organized by the Redhawk Native American Arts Council; the Fly-In of Antique Aircraft, organized by the Adirondack Soaring Club; the Antique Auto Show, organized by Antique Automobile Association of Brooklyn; and the MTA Bus Rodeo.

FBF serves multiple uses, many of which incorporate FBF’s history. The park’s historical items have been reinterpreted and have become the basis for events, hobbies and other pastimes.



4.1.03 HISTORIC AIRCRAFT RESTORATION HANGAR, 2006



4.1.04 ICE SKATING AT AVIATOR SPORTS AND RECREATION COMPLEX, 2006



4.2.01 WILLIAM FITTS RYAN VISITORS CENTER, 2006



4.2.02 AVIATOR SPORTS AND RECREATION COMPLEX, 2006

4.2 Cultural and Industrial Background

The aviation history of the United States is encapsulated at FBF in the historical structures that housed the aircraft of record-making aviators; and the runways that were their origin and/or destination point. During WWII, FBF was used by the U.S. Navy to test aircraft before their entry into combat. FBF was also used as a test site during the development of helicopters and was the location of the first helicopter school in the United States. This former airfield and these heritage sites were opened to the public for their education and enjoyment as part of Gateway in 1974.

Historically, the site functioned as a sand source: William Moore, in the mid-1740's, mined sand from the surrounding beaches and shipped it to New York City for sale. At that time FBF was known by other names. Its Lenape tribe name was Equendito and its European names included Broken Lands, Bearn Island, Barn Island, Bear's Island as well as Barren Island, which is now the acknowledged previous official title, before its use as an airfield.¹

The first recorded inhabitant on Barren Island was Dooley, who built a house on the eastern end around 1800. This building was open for the entertainment of sportsmen and fishermen, and an 1852 map designates it as a hotel. But Barren Island was quickly turned from an idyllic leisure island to a wasteland of refuse by the growth of New York City. Following this recreational development on Barren Island, were the waste recycling factories, which opened in the late 1850's. These factories processed dead horses and other animals from New York City for fertilizer, which was exported to Europe. Barren Island's waste industry was clustered at the southern and eastern portions of the island where the water was at its deepest and boats could dock to transport goods. In the 1860's fish oil manufacturers also set up factories on the island. Afterward, it became the receiving area for the refuse of New York City. As erosion occurs in this portion of FBF, old refuse is exposed and transported to an area on FBF nicknamed "Bottle Beach" for the number of antique glass bottles that can be found on its shore.

As the city found other means to handle its refuse, these industries subsided, and New York City's first municipal airport was built. This airport played a key role in the dawning of aviation in the 1930's and the success of the Allies in WWII.

Some of the most important structures of that time are still evident today, including the open flatlands of the airfield runways. The structures still surviving include the original hangars, the runways, the control tower and administration building, the entrance-driveway, and the passenger tunnel. Some of these structures have been refurbished for new uses. The first of which was the air control tower and administration building, which were legislated to be the principle visitor center for Gateway. The most recent example is the Aviator Sports and Recreation Complex, which is housed within Hangars 5, 6, 7 and 8. The runways of the former airfield also provide the main vehicular routes in the park.

In addition to the open space opportunities at FBF, there are 24 structures designated as being of historical importance, marked as such by NPS's List of Classified Structures. All of these structures played a role in FBF's aviation history. They range in size from large structures, such as the runways, the taxiways and the hangars, to smaller items, such as the steel flagpole and the compass rose. The airfield and these structures are currently a federally listed historical district, and its nomination is in the process of being updated. Therefore any development on the site and its structures would need the approval of the New York State Historic Preservation Office. Some of these facilities are in need of basic maintenance and are available for adaptive reuse. It is anticipated that many of these structures would need asbestos remediation.



4.2.03 STRUCTURE AT FLOYD BENNETT FIELD, 2006

STRUCTURE	CURRENT USE	CONDITION
Administration Building	Visitor Center	Fair
Apron Drainage System	Utility Service	Fair
Cast Iron Light Standards	Removed	Fair
Circular Concrete Feature	Not in use	Poor
Compass Rose	Not in use	Fair
Electrical Vault	Utility Service	Fair
Entrance Drive	Road related	Good
Fire Pump House	Vacant/Maintained	Poor
Garage and Maintenance Shop	Vacant/Unmaintained	Poor
Hangars 1 and 2	Vacant/Unmaintained	Poor
Hangars 3 and 4	Vacant/Unmaintained	Poor
Hangars 5 and 6	Concession	Good
Hangars 7 and 8	Concession	Good
Light Beacon	Not in use	Poor
Passenger Tunnel	Not in use	Poor
Pump House	Lift Station	Poor
Runways 1929-31	Government	Fair
Runways 1937-38	Government	Fair
Seaplane Ramp	NYPD Aviation	Fair
Steel Flagpole	Monument	Fair
Taxiway	Government	Fair
Transformer Building	Concession	Fair
Wood Light Standard	Removed	Poor
Gasoline Pump Station	Removed	Poor

4.2.04 LIST OF CLASSIFIED STRUCTURES AT FLOYD BENNETT FIELD, 2006

PHOTOGRAPHER: SARAH WILLIAMS / COLUMBIA UNIVERSITY

DATA SOURCE: NATIONAL PARK SERVICE

4.3 Ecologies

FBF is home to many species of wildlife and has a unique upland habitat character. Since 1985 the NPS has maintained a 140-acre grassland by mowing and burning for the nesting and feeding of these species. Dead Horse Bay is an example of salt marsh and tidal mudflats. These areas have trails and some signage for visitors.

Jamaica Bay is sheltered from the Atlantic Ocean by the Rockaway peninsula and is the western-most coastal lagoon on the southern shore of Long Island. Surrounding the bay are eighty-five thousand acres of highly urbanized, sea-ward sloping land south of the Harbor Hill terminal moraine of Long Island, which drain urban run off and water into the bay. Jamaica Bay is on average quite shallow, and its water warms quickly in the spring, attracting many species of fish and birds. FBF contributes substantially to this ecosystem by its great diversity of grassland, upland, wetland and mudflat habitats for mammals, birds and benthic species.

DATA SOURCE: U.S. FISH AND WILDLIFE SERVICE

ATLANTIC RIDLEY SEA TURTLE	LEDPIDOCHELYS KEMPII	FEDERAL ENDANGERED
ROSEATE TERN	STERNA DOUGALLII	FEDERAL ENDANGERED
PEREGRINE FALCON	FALCO PEREGRINUS	FEDERAL ENDANGERED
LOGGERHEAD SEA TURTLE	CARETTA CARETTA	FEDERAL THREATENED
PIPING PLOVER	CHARADRIUS MELODUS	FEDERAL THREATENED
SEABEACH AMARANTH	AMARANTHUS PUMILIS	FEDERAL THREATENED
DIAMONDBACK TERRAPIN	MACLEMYS T. TERRAPIN	FEDERAL CONCERN
ROLAND'S SEA-BLITE	SUAEDA ROLANDII	FEDERAL CONCERN
LEAST TERN	STERNA ANTILLARUM	STATE ENDANGERED
WILLOW OAK	QUERCUS PHELLOS	STATE ENDANGERED
NORTHERN HARRIER	CICUS CYANEUS	STATE THREATENED
OSPREY	PANDION HALIAETUS	STATE THREATENED
COMMON TERN	STERNA HIRUNDO	STATE THREATENED
SPOTTED SALAMANDER	AMBYSTOMA MACULATUM	STATE CONCERN
LEAST BITTERN	IXOBRYCHUS EXILIS	STATE CONCERN
COOPER'S HAWK	ACCIPITER COOPERII	STATE CONCERN
UPLAND SANDPIPER	BARTRAMIA LONGICAUDA	STATE CONCERN
SHORT-EARED OWL	ASIO FLAMMEUS	STATE CONCERN
COMMON BARN OWL	TYTO ALBA	STATE CONCERN
GRASSHOPPER SPARROW	AMMODRAMMUS SAVANNARUM	STATE CONCERN
HOUGHTON'S UMBRELLA-SEDGE	CYPERUS HOUGHTONII	STATE RARE PLANT
BLUNT SPIKERUSH	ELECHARIS OBUSA VAR. OVATA	STATE RARE PLANT
FIELD-DODDER	CUSCUTA PENTAGONA	STATE RARE PLANT
SMARTWEED-DODDER	CUSCUTA POLYGONORUM	STATE RARE PLANT
SCHWEINITZ'S FLATSEDGE	CYPERUS SCHWEINITZII	STATE RARE PLANT

4.3.01 ENDANGERED SPECIES AT JAMAICA BAY, 1996

The waters of the adjacent Jamaica Bay have a mean depth of 13 feet, though some areas have been dredged for fill and navigational purposes and can be up to 50 feet deep. There are two main sources of water to Jamaica Bay, the Atlantic Ocean and the water pollution control plants. During rainy conditions urban water runoff discharges from the area's combined sewer overflows. The pollutants found in this water cause a eutrophic condition within Jamaica Bay, which in turn causes phytoplankton blooms, creating turbid water and low dissolved oxygen concentrations. Despite these adverse conditions, Jamaica Bay is a "highly productive and regionally significant habitat for finfish, shellfish, and wildlife."¹ It supports seasonal or resident populations of 48 fish and 120 bird species that are listed as endangered or are of special concern.

The most important commercial and recreational fish that has great numbers in Jamaica Bay is the winter flounder. The foraging species of fish found in the bay include bay anchovy, mummichog, Atlantic menhaden, Atlantic silverside, and striped killifish. Jamaica Bay is also a habitat for scup, bluefish, windowpane, tautog, weakfish, black sea bass, summer flounder, American eel and searobin. Blueback herring, Atlantic sturgeon, alewife, American shad and striped bass are anadromous species that use the bay for breeding.

Like the Lower New York Harbor to which it is connected, Jamaica Bay has a semidiurnal tidal flow. During low tide, extensive tidal areas including mudflats, low salt marshes and high salt marshes are exposed and provide rich food sources for shorebirds and waterfowl. During high tide, these become the feeding areas for fish. The intertidal zone at FBF has sediments that range from fine to medium sands from marine sources to glacial till. These support a habitat for many invertebrate species of mollusks and crustaceans, such as the intertidal soft clam, the northern quahog, and the Atlantic surf clam. The blue mussel can also be found in these areas; however, it prefers to attach itself to structures in the water such as jetties or piers.

An important habitat at FBF that contributes to the Jamaica Bay ecology is that of the 140 acres of grasslands that have been restored and maintained by the NPS, in partnership with the New York City Audubon Society. It is known as the Grassland Restoration and Management Project (GRAMP). The nesting grassland birds at GRAMP are the horned

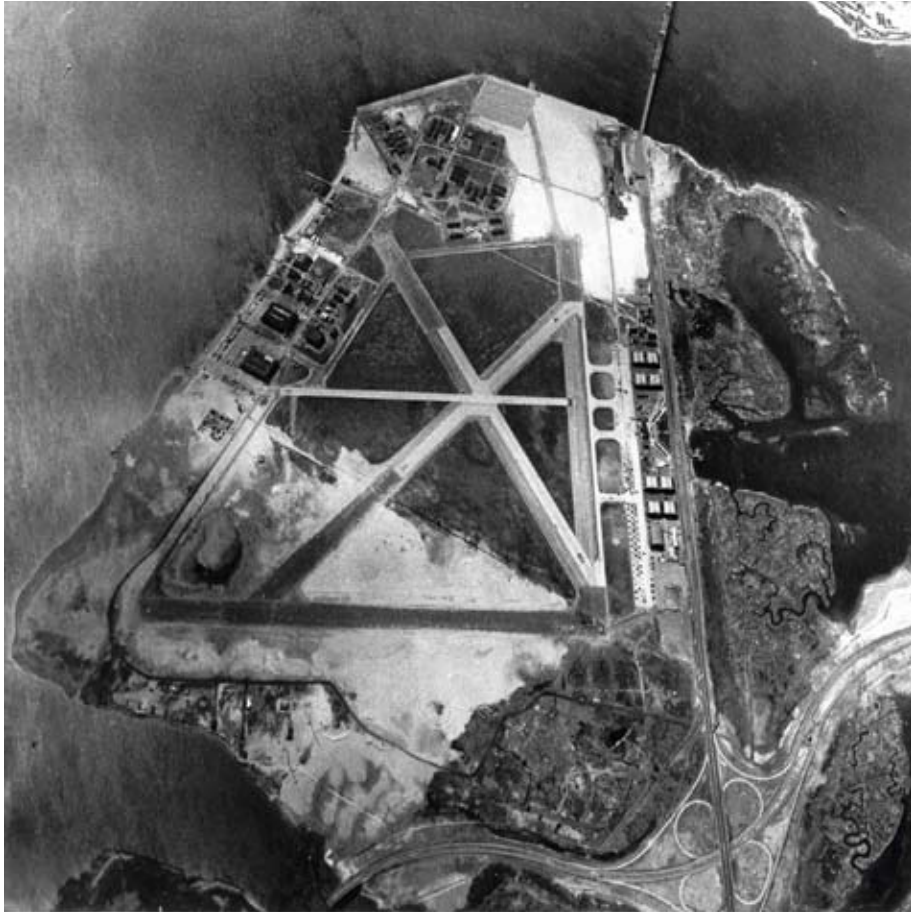
lark, eastern meadowlark, upland sandpiper, Savannah sparrow, northern harrier, American kestrel and the common barn owl. The over-wintering grassland birds seen here are the northern harrier, American kestrel, rough-legged hawk, short-eared owl, common barn owl, horned lark, eastern meadowlark and Savannah sparrow. The bobolink is also a regular visitor to the grasslands of FBF. These grasslands provide ecological services and preserve a habitat for species of wildlife that would otherwise be driven from this area due to urbanization. Another significant bird habitat at FBF is on its northeastern shoreline where two nesting locations for the American oystercatcher have been found. Many of the birds found at FBF are rarely seen in the Northeast region of the United States.

In addition to these birds, FBF also supports two species of rare vegetation. These are the Schweinitz's flatsedge on the southern and northern ends of FBF, and willow oak saplings in the northern bayberry thickets. Other vegetation on FBF is less rare, and includes black cherry, gray birch and cottonwood. There are also shrub thickets dominated by bayberry, winged sumac, and Japanese knotweed, while the marshland is comprised mostly of the common reed, which is also known as phragmites.²

Jamaica Bay and FBF are greatly affected by the urban landscape that surrounds it. The intensity with which it is inhabited by wildlife is because of the paucity of areas that can be inhabited by these creatures.



4.3.02 TARMAC POOL AT RAPTOR POINT IN FLOYD BENNETT FIELD, 2006



4.4.01 AERIAL PHOTOGRAPH OF FLOYD BENNETT FIELD, 1944

4.4 Access and Infrastructure

FBF itself is a peninsula, connected to the mainland only by a single local road, Flatbush Avenue. Flatbush runs from Manhattan Bridge to the Jacob Riis Park, separating the FBF airfield from Dead Horse Bay, Gateway Marina, and Gateway Golf. One municipal bus route, the Q35, runs along Flatbush and makes a stop at FBF. Access by vehicle is limited to Flatbush Avenue and the Belt Parkway. The airfield has one primary vehicular entrance on the eastern side of Flatbush Avenue, which is on the southwestern corner of the park. The concessionaires, Gateway Marina and Gateway Driving Range have separate entrances on the west side of the road, as does Dead Horse Bay.

A 2006 transportation study by the Federal Highway Administration titled “Jamaica Bay Transportation Studies”¹ identified the single access route to the airfield as being problematic for a number of reasons. Those reasons include user conflicts between the vehicles of the government agencies housed on FBF and the visitors to the park, as well as a lack of identity and “park like approach.” The recommendations of this report were to add two more entrances on Flatbush Avenue, one that would access the Aviator Sports and Recreation Complex and another that would access the William Fitts Ryan Visitor Center. The existing access would probably be more frequently used by the government agencies accessing their bases, though it would remain open to the public.

Once on FBF, parking facilities are located by the William Fitts Ryan Visitor Center, the Aviator Sports and Recreation Complex, the governmental buildings, Gateway Marina and Gateway Driving Range. The runways that are the main access roads to the airfield are also informal parking areas.

The Gateway Marina provides water access to FBF on the western side of the park, and the seaplane ramp that is used by the NYPD provides access to the water on the eastern side. This seaplane ramp is sometimes used for the launch of recreational kayaks into Jamaica Bay.

The occupied buildings at FBF have the typical utility services, such as fresh water, gas and electricity as well as sanitary and storm water service. These services may need to be repaired for those buildings that are in disuse and disrepair. Large areas of FBF are not serviced by these utilities, as it was not required in its former use as an airfield.

The development and transformation of Floyd Bennett Field is currently constrained by its infrastructure and accessibility, which is mainly by private vehicle from Flatbush Avenue. It is also limited by its overall capacity relative to roadways, and electrical, gas, sanitary and storm-sewer provisions.

4.5 Potential

Floyd Bennett Field is a place rich in aviation history, the history of waste infrastructure in New York, informal uses, evolving cultures, and municipal functions. It currently preserves habitats for rare species of wildlife, and its flat, open spaces are utilized by government agencies, private companies and hobbyists. This mixture of conditions, combined with its seemingly abandoned quality and its proximity to an urban population make it a complex and fascinating place. However, Floyd Bennett Field lacks clear definition relative to its role as an urban national park, a regional piece of infrastructure, and a resource for those who neighbor it.



4.5.01 FLOYD BENNETT FIELD SHORELINE

PHOTOGRAPHER: LI-CHI WANG / COLUMBIA UNIVERSITY

