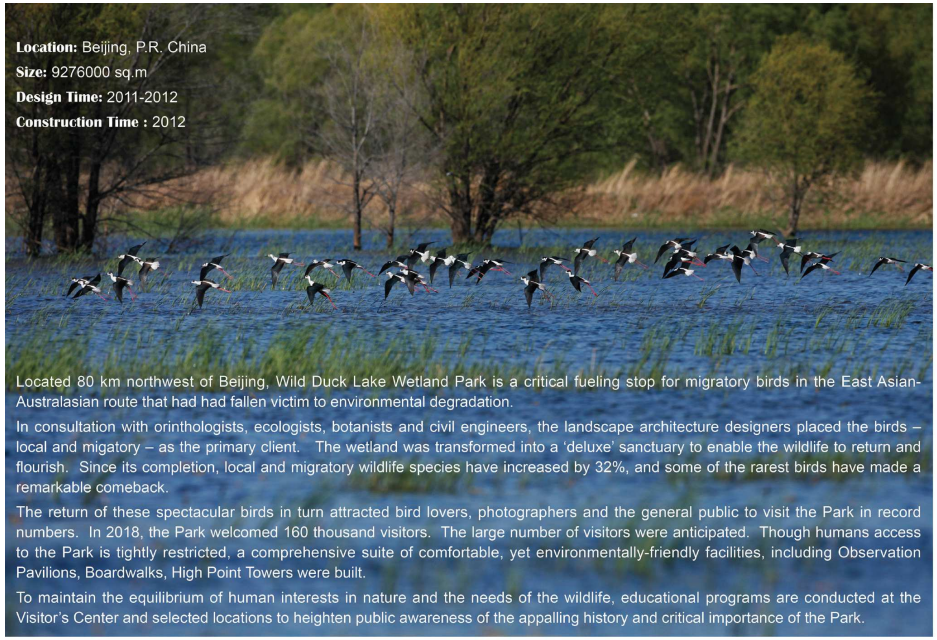

Location: Beijing, P.R. China
Size: 9276000 sq.m
Design Time: 2011-2012
Construction Time : 2012

Located 80 km northwest of Beijing, Wild Duck Lake Wetland Park is a critical fueling stop for migratory birds in the East Asian-Australasian route that had had fallen victim to environmental degradation.

In consultation with orinthologists, ecologists, botanists and civil engineers, the landscape architecture designers placed the birds – local and migatory – as the primary client. The wetland was transformed into a 'deluxe' sanctuary to enable the wildlife to return and flourish. Since its completion, local and migratory wildlife species have increased by 32%, and some of the rarest birds have made a remarkable comeback.

The return of these spectacular birds in turn attracted bird lovers, photographers and the general public to visit the Park in record numbers. In 2018, the Park welcomed 160 thousand visitors. The large number of visitors were anticipated. Though humans access to the Park is tightly restricted, a comprehensive suite of comfortable, yet environmentally-friendly facilities, including Observation Pavilions, Boardwalks, High Point Towers were built.

To maintain the equilibrium of human interests in nature and the needs of the wildlife, educational programs are conducted at the Visitor's Center and selected locations to heighten public awareness of the appalling history and critical importance of the Park.

The Wild Duck Lake Wetland Park

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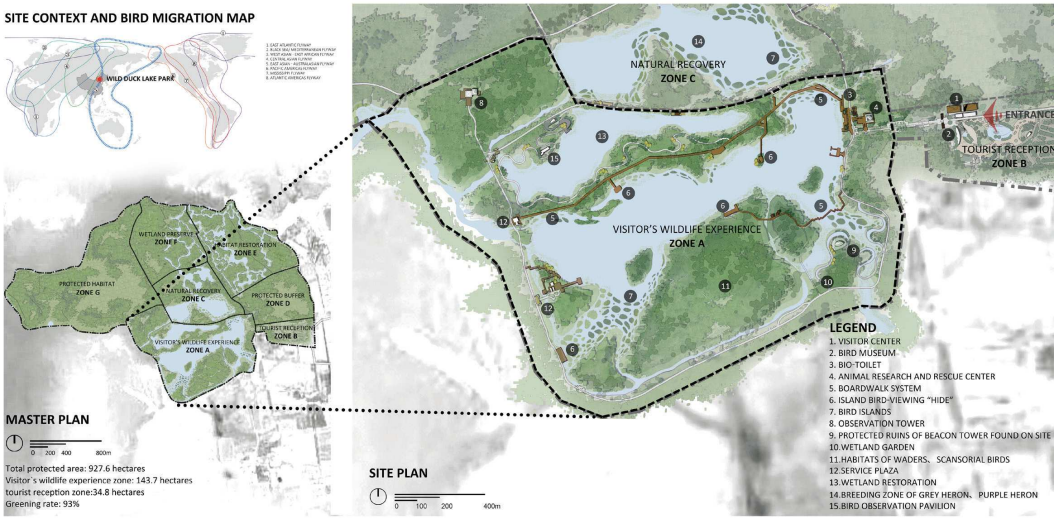


The master plan divides the site into seven protection zones based on topographic and hydrological conditions. People are restricted to the Visitor's Wildlife Experience Zone to lessen the impact on the overall site, providing windows into the pristine reestablished habitat.

Before restoration, years of accumulated garbage polluted the site. After a massive clean-up, elevated boardwalks were strategically placed to allow people controlled access, and allow the natural flow of water and animals to pass beneath establishing an undisrupted habitat.

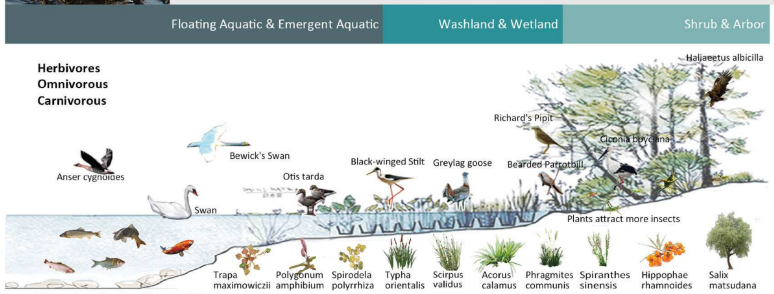
WHAT'S DONE FOR WILD LIFE

32% increase in overall bird population, from **233** (2005) to **343** (2018) recorded species.
10 species are First Class National Protected Birds and **43** species are Second Class National Protected Birds.

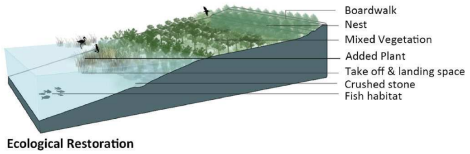
A transit point for the international bird migration route (East Asian - Australasian route).
75 migratory bird species and more than **100,000** individuals have been recorded stopping annually (2015).

WHAT'S DONE FOR PEOPLE

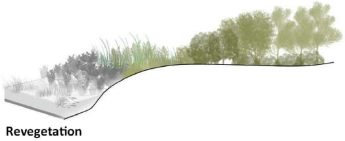
Visitor numbers have increased year by year reaching **160,000** people in **2018.**



Ecosystem Restoration and Reconstruction



Ecological Restoration

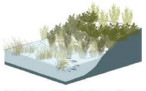


Revegetation

Connection of Water

Addition of Finger Islands

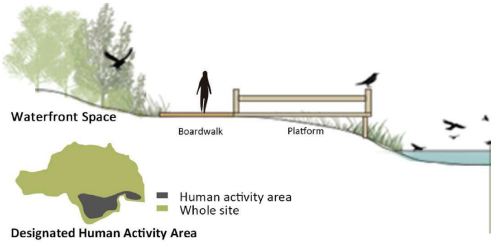
Create Dead-End Paths



Wetland Bank Repair

- CONSTRAIN HUMAN ACTIVITY IMPACT
- WATERFRONT ACCESSIBILITY
- NON-POLLUTION VEHICLE
- OBSERVATION
- EDUCATION PROGRAMS
- ANIMAL RESCUE
- EXERCISE
- HIKING
- PROVIDE VISITOR CENTER
- BOARDWALK SYSTEM
- MUSEUM
- HIGH POINT OBSERVATION TOWER
- ADDITION OF SHADE TREES
- LIGHTING DESIGN

- STORMWATER OUTLET REPAIR
- HABITAT RESTORATION
- ECOLOGICAL DIVERSITY
- PLANT DIVERSITY
- VEGETATION COVERAGE
- REMOVE GARBAGE
- FINGER ISLANDS
- WATER PURIFICATION
- WETLAND BANK REPAIR
- BIO-FRIENDLY CONCRETE
- PLANT ADAPTATION
- RIPARIAN HABITAT STABILITY
- ECOLOGICAL RESTORATION
- CREATE DEAD-END PATHS
- LIVE SPONGE
- BIONIC SYSTEM CREATION APPROACH
- ECOLOGICAL RESTORATION
- REVEGETATION
- CONNECTION OF WATER
- BROKEN LOOP ROAD



Designated Human Activity Area

Observation

Education

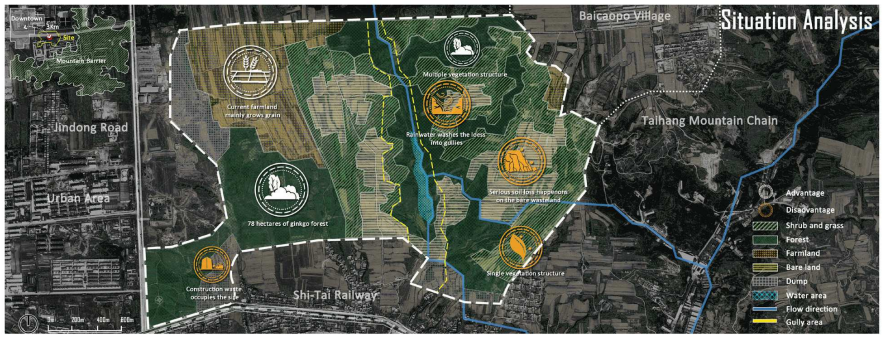
Animal Rescue

Exercise

Boardwalk System

Visitor Center

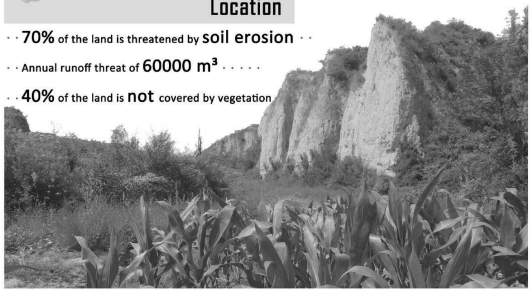
Jinzhong Baicaopo Park - Reconstruction of Regional Natural Ecosystem on Loess



Background of the project

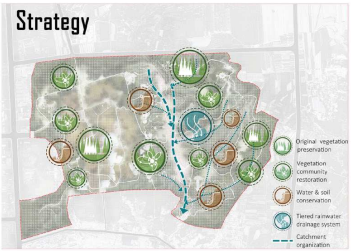
The project is located in the east of the downtown of Jinzhong City, Shanxi Province. The total area is about 348 hectares.The project area is typical of loess relief, the west side is hilly platform, the east side is relatively open. The overall terrain is high in the east while low in the west. The terrain is complex, with many cliffs and steep slopes, and the middle part of the site is a north-south loess valley formed by the erosion of rainwater all year round. The site has poor vegetation conditions, and there are large areas of exposed wasteland. There are about 78 hectares of ginkgo forest in the central part and a small amount of forest land concentrated in the eastern part. The rest of site are mostly farmland or poorly grown grasses and shrubs.

- 70% of the land is threatened by soil erosion
- Annual runoff threat of 60000 m^3
- 40% of the land is not covered by vegetation

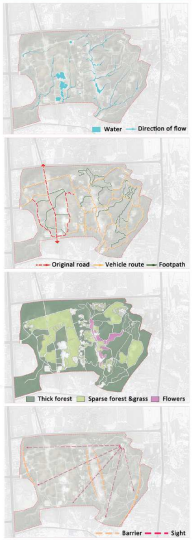


Design Challenge

The widely distributed collapsible loess is a special soil which the structure can be quickly destroyed by water. This special soil characteristic makes the soil erosion occur frequently in the rainy season, and the terrain is unstable all the year round. However, due to the easy sedimentation of loess, the conventional engineering measures of soil consolidation are very limited. Therefore, it is the key issue that how to use landscape methods to preserve the geomorphological characteristics of the site and maintain the stability of water and soil for subsequent design. At the same time, how to restore the damaged vegetation in the site, provide habitat for different species, how to deal with the artificial waste and how to enhance the landscape attractiveness of the site are all urgently to be solved.



Design Analysis

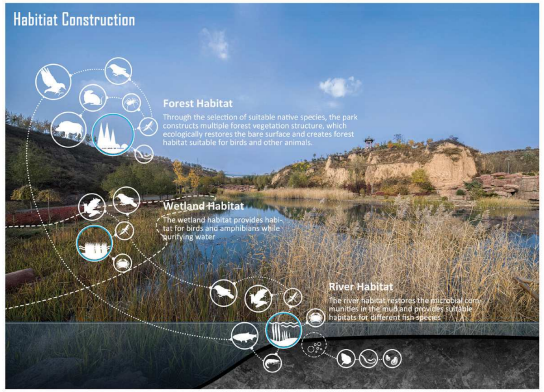


Water System
A safe water system has been constructed under the original hydrology.

Transportation System
A coherent transportation system of the park is based on the original road.

Plant
The restoring of park vegetation is based on current vegetation with native vegetation community as reference .

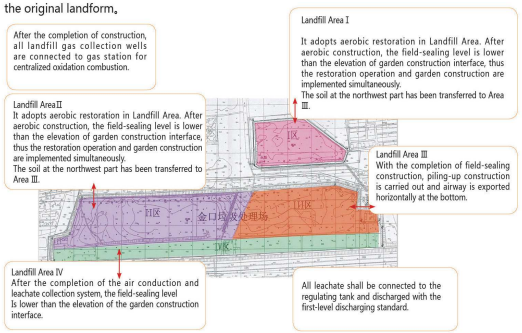
Sight
The Northeast is the commanding heights of the whole park. Different spaces create abundant changes in sight.



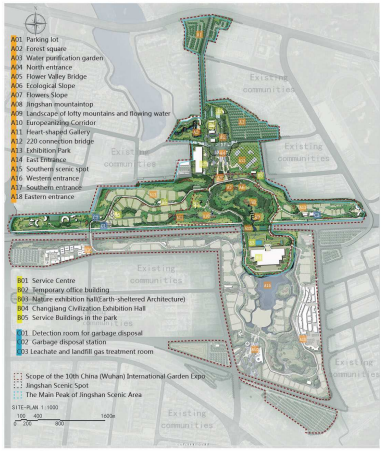
IFLA THE TENTH CHINA INTERNATIONAL GARDEN EXPO JINSHAN SCENIC AREA IN WUHAN

Construction of jingshan scenic area - landfill restoration

The reuse technology of brownfield of abandoned domestic waste dump, reduces the degradation process form 30-50 years to 3 years with the rapid degradation treatment and rejuvenates land value. The landfill has been divided into four zones based on the mounds feature. The management features the balance of safety and landscape, creating a beautiful natural mountain landscape with the original landform.



Site Information



Jingshan Hill is the northern core scenic area of the 10th China (Wuhan) International Garden Expo Park , which covers an area of 105 hectares, The main site used to be the 45-hectare obsoleted Jinkou landfill. Through the rapid and harmless treatment and ecological reconstruction of the garbage dump, an open ecological park has been created for the surrounding 100,000 residents.

Urban Ecological Series

Through ecological darning, Wuhan has realized the integration and infiltration of Fuhe green wedge, one of the six urban ecological green wedges, into the urban area, forming the regional ecological systematic linking.

Site Information

Wuhan Jinkou Landfill covers an area of 45 hectares with a total waste capacity of over 5 million cubic meters and an average landfill depth of 10 meters. Due to the strong opposition from the local residents, the dump stopped operation in June of 2005. At that time, it had only simple closure while the waste gas, waste water and waste residue generated were not stopped, exerting huge danger to this area.

The whole ecological restoration project does not involve any excavation of garbage mounds and features the balance of safety and landscape, creating a beautiful natural mountain landscape with the original landform.

LID low-impact ecological grass ditch technology

The LID low-impact ecological grass ditch technology is adopted to set up an ecological grass ditch on the hill every five meters, in which soil-retaining plants are planted in the grass ditch to minimize the erosion damage from rainwater, so as to prevent soil erosion.