

Houtan Expo Park

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Aaron Vandenberg



Riverine Walkway Along Huangpu River



14 The steel arbor in the wetland is composed of recycled steel panels from the site, which provides shade, shelter, frames views, and shapes spaces.

The site is a narrow, linear 14-hectare band of property along the Huanpu River waterfront district in Shanghai, China. The former brownfield, was once home to a steel factory and shipyard and has remnant industrial structures remaining across the site that serves as a reminder to the visitors who come to the park. Much of the site was used as a landfill and industrial waste depot until Shanghai officials decided to convert the area to a new form of park that will serve as a icon of China's efforts to formulate a new topology of public space.

The main objective of the site was to be a green space for the World Expo and to accommodate a large influx of visitors from May to October, 2010. The site demonstrates the latest display of green technology and the designers sought to create a permanent public waterfront park after the Expo.

The main challenges of the space was to restore the polluted waters and terrestrial landscape. Prior the installation of the park, the brownfield leached dangerous toxins into the river. The river was rated as one of the most polluted rivers in China. On a scale from I-V, the Huangpu river was rated as a Lower Grade V on a relative scale that China uses in a national, environmental-health assessment. The major challenge to the site was to transform the water and the site into something that would not be a public health risk.

The second major challenge was to improve flood control and minimize damage from large-scale flooding. A flood wall, nearly 22 feet tall, lined the river but the designers suggested an alternative flood control scheme by integrating

Yu [the designer] sees the artificial creation of landscape as having parallels with the old practice of foot binding - twisting and shaping women's feet out of all recognition.

"It is a kind of ludicrous and harmful feudalistic aristocratic aesthetic," says Yu, "It's like when we bound women's feet and still viewed it as beautiful and elegant. We now are binding the feet of nature."

Force for Nature. Global Times. <http://www.globaltimes.cn/www/english/metro-beijing/people/profile/2010-04/527179.html>



Houtan Park Shanghai, China



Location: Shanghai, China

Landscape architect: Turen-scape, China and Peking University Graduate School of Landscape Architecture

Client: The 2010 Shanghai Expo Bureau, China

Design Principal: Kongjian Yu, International ASLA

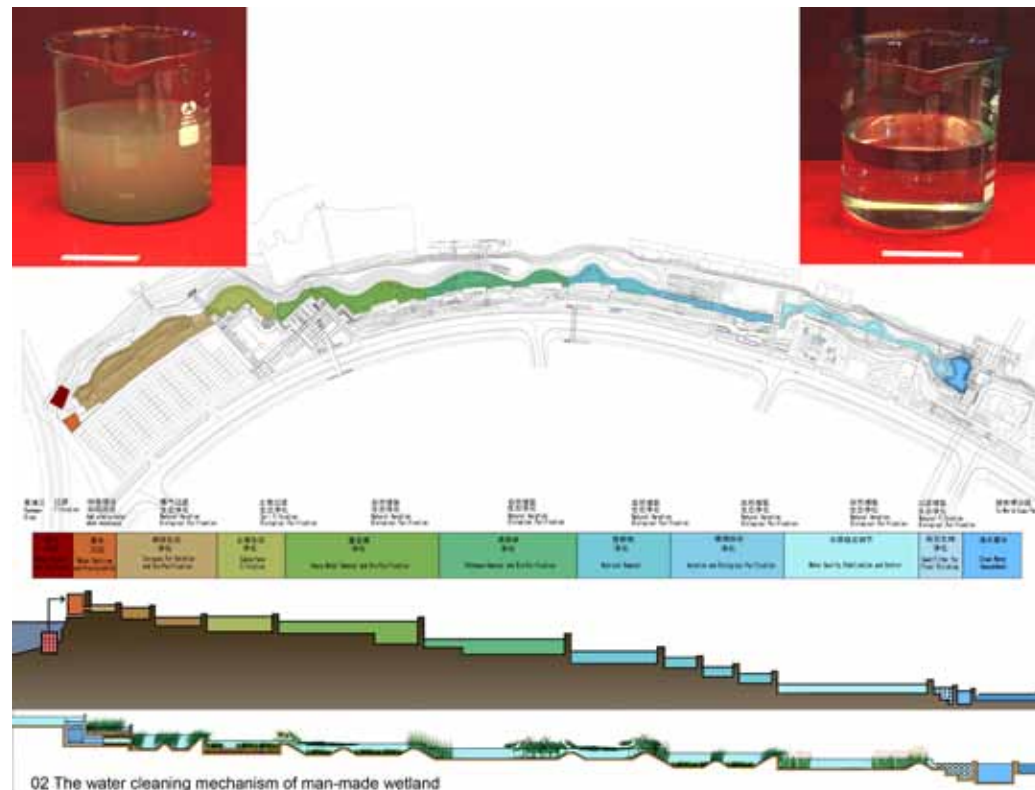
Design Team: Shihong Lin, Wei Hong, Tianyuan Yuan, Hongqian Yu, Yuan Fang, Yuanyuan Jin, Xiang Long, Xiangbin Kong, Dongli Ren, Yuan Zhang, Haibo Tang, Weirong Jiang, Yu Qiu, Shaohui Bai, Meicai, He, Fan Yang, Junying Zhang, Yang Pan, Jing Zhang, Xiangjun Liu, Hongxia Ding, Jing Niu, Yuan Zhang, Shaohua Lin, Yanan Zang, Zongbo Shao, Dehua Liu, Fumin Yu, Rao Chen, Wei Zhang, Jiwei Chen, Xiangrong Wan

Client Team: Lin Guixiang, Zhao Keping, Lin Li, Shanghai Expo Bureau; Zhang Rang, Shanghai Landscape Bureau

regenerative design strategies into the river bank. One of the major methods of flood control was to reestablish a 1-mile by 30 meter artificial wetland strip that treats contaminated water, re-oxygenates the nutrient rich water and reduces suspended sediments. Pumps redirect the river water out of the main channel, and runs it through water features to reestablish a higher dissolved oxygen content and redirect the through the wetland for a final cleansing before it is released back into the main channel. The system can cleanse up to 50,000 gallons of water from Grade V to Grade III which can be used for non-potable uses and saves a half of a million dollars in water treatment expenses.

Design Inspiration

The designers terraced the grade of the park that refers to the structures once created on agricultural lands in China during the mid-20th century in Shanghai. Crops integrate green infrastructure while the planting plan includes edible plants that serve as an educational opportunity for people to learn about farming practices once practiced in the rural areas around the city. The entire site creates opportunities for people to explore and gain a vital connection to natural forms as there currently is a taboo against any landscapes that aren't manicured as the society generally does not see wetlands as useful spaces and will often destroy them in exchange for green lawns or clean slate walls. This park challenges people to go beyond the misconceptions and realize the power of natural landscapes as performance spaces that are vital to a healthy environment for nature and humans. (ASLA 2010 Awards Website. Houtan Park. October 7, 2010. <http://asla.org/2010awards/006.html>)



Sustainable Urban Systems Approach

The designers created a sustainable design approach by integrating river water into the Expo Center as a heating and cooling medium for a hydro-thermal heat pump. The site also uses rain water collection, wind-energy generators and solar collectors to offset the energy needs of the Expo. (Topos. 70.2010 Sustainability. www.info-jola.de/pdfs/Topos.pdf)



Houtan Park, Shanghai China



Construction Contractor: Chen Ming, Zhu Xiejun, Yuan Chao, Chao Shiwei, Xin Lixun, Zhou Guinian, Shanghai Landscape Construction Company

Wetland Plant Scientists: Zhang Yinjiang, He Peiming, He Wenhui, Du Jiamu, Xie Wenbo, Luo Kun, Chen Lijin, Dong Yue, Zhang Nianjian, Huang Zhongwen, Shanghai University of Ocean University

Construction Document Local Consultants: Su Shouliang, Shnanghai Qite Landscape Company; Xu Lian, Shanghai Xiandai Design Group

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