

Continuation of Site Memory

—Talking About the Renewal of Industrial Landscape as an Example in Houtan Park

Shengze Chen¹

¹*Shanghai University
CZinspiration@163.com*

ABSTRACT

With the transformation of Chinese industrial structure and the development of new urban planning, a large number of traditional industrial equipment or factories have been relocated or abandoned, leading to the emergence of many industrial abandoned land in the city, bringing a series of environmental and social problems. In the face of these problems and challenges, landscape renewal of abandoned industrial facilities or sites is an effective solution. Through combing the related literature, and taking the landscape renewal of Houtan Park in Shanghai as an example, this paper makes a preliminary exploration of the renewal concept, design strategy and artistic expression of industrial landscape.

Keywords: *Industrial landscape, historical context, ecology, sustainable design*

1. INTRODUCTION

In general, industrial wasteland mainly has the following characteristics: in the topography, there are traces of artificial creations, most of the sites are hard ground, a small amount of plants are retained, and the open space generally contains a large amount of industrial waste. Due to the continuous expansion of the scale of the city, some industrial wasteland areas have become the center of the city.

"Shanghai World Expo Park site of industrial research in a wider context driven by how big the event of retention and use of renewable, the event is one of the city's urban renewal power¹". In China, although the history of industrial development not as a long as the early industrialized countries, but China's rapid industrial development and comprehensive, and with the

characteristics of the times, represents the new China's industrialization process, carrying the ideals and a generation Pride, at the same time, urban planning and development also promote the progress of industrial landscape transformation. The protection and transformation of these industrial legacy has become a problem that designers need to think about and solve.[1]

2. HOUTAN PARK

Houtan Park is located by the Huangpu River in Shanghai. The design and construction period has stated from 2007 to 2009². The design team is a native landscape led by Yu Kongjian. Site is located in the Shanghai 2010 World Expo Garden on the west side, even if the purpose of the construction of the World Environment Bo park beautification, but also to improve the public space environment Huangpu River. [2]



Figure 1 Old factory building after renovation

Yu Kongjian said in the interview, “We also considered how to carry out ecological restoration under severely polluted conditions, and proposed the concept of “return of beaches”, using brownfield ecological restoration methods and new landscape design approaches, on a natural level. superposition of industrial culture, natural recovery, restoration ecology, land restoration, while preserving the cultural industry, the formation of Shanghai World Expo Garden Features ". This is not only an efficient purification system, but also an ecological and natural purification system. In addition, under the ecological restoration, through the redesign of industrial facilities, the industrial spiritual culture and material culture representing the memory of the site are integrated into it, creating an unique historical and cultural features of the site.[3]

3. INDUSTRIAL LANDSCAPE RENEWAL STRATEGY

As we all know, wetlands are precious natural resources on land. The title of "Kidney of the Earth" represents its unparalleled purification effect. It has multiple functions, such as improving water quality, regulating runoff, and protecting biodiversity. One of the major difficulties in the transformation of Houtan Park is the serious water pollution, so the construction of inland river wetlands within the site has become the key to solving the problem³. Through modern technological methods (sedimentation, aeration and oxygenation, etc.) and ecological self-purification (purification of plants and microorganisms), the water quality of Huangpu River's inferior Grade V water is improved to Grade III

water after being filtered and purified in layers by terraces. So as to meet the green watering water in the garden and flushing water in toilets and other places. During the construction process, the project used a lot of old materials left over, such as old bricks and tiles, steel, etc⁴. There are many green planting altars around the viewing platform Ludi Terrace, the extension of which is composed of the original old steel plate of the site, the rust-colored steel plate and the scenic wall with industrial culture characteristics form a harmonious and site-specific landscape. [4]

In order to fully realize the accessibility within the site, the renovation project has constructed a "one ring, six vertical, multi-path" The trail network is mainly manifested as the main road along the two banks of the inland wetland and the trestle bridges interspersed in it, which play the role of connecting the trails on both sides.

In terms of landscape facilities, designers need to consider the detailed part of the design, taking into account the psychological characteristics of people, starting from humanistic care, and achieving humanized design. In the public leisure landscape, provide people with comfortable resting and talking places, such as public seats, long corridors, etc⁵.; and in the setting of toilets, attention should be paid to the distance and location of the configuration to ensure that visitors in all places in the park can Quickly find the toilet closest to you; all kinds of people (children, the elderly, the disabled, etc.) should be considered in the design of the sign to ensure that the information to be conveyed is clear and clear.[5]



Figure 2 Old wharf after renovation

The original industrial facilities, as a representative of the site's history, have strong characteristics of the times and historical and cultural significance. For example, the industrial plants left in Houtan Park are split, filled, interspersed and other methods to preserve the skeleton of the plant and remove external parts. Then it is decorated and painted, combined with the newly built building, to form a comprehensive service center in Houtan Park-"Sky Garden", which provides services such as tea seats and toilets. There are similar cases transformation of Beijing Shougang park, the old steel plant and the master control room full of modern Starbucks coffee shop knot together, the history of the steel industry is full of flavor of the original factory building was marked with the red, with a layer of bright café Echo each other, forming a unique architectural landscape.[6]

Industrial landscape reconstruction must not only consider the historical and cultural characteristics of the site, but also consider factors such as economy and ecology. After the renovation, it was newly built as a riverside viewing platform-Ludi Terrace, where people can overlook the scenery of the Huangpu River. Ludi Taiwan is not completely independent of the cultural venues, which is designed with many scene wall surface, using abstract artistic methods of expression, on behalf of the steel plate ironworks memory design.

In addition to adding and subtracting on the original industrial products, new designs made in accordance with the site characteristics will also bring new inspiration to the design. For example, the representative structure in Houtan Park-the "rusty long scroll"⁶, which is a The long-striped landscape structure made by splicing steel plates left over from the site stretches over half of the park, sometimes on the ground, sometimes on the gallery, like

an origami work, very distinctive, this landscape sketch has become the most common in Houtan Park Landmark structures. [7]

How to find beauty in the rusty and messy remnants of the original site and make a reasonable and appropriate transformation requires a unique vision of the designer. "Subverting the concept of beauty and cultural relics, the core here is the question of how an ugly thing becomes beauty ". The "rusty scroll" in Houtan Park, through the artistic processing of ordinary materials and industrial equipment, gives it new vitality. Another example is the transformation of the Shanghai Urban Sculpture Art Center "Red Square". The driving beams are redesigned into a multifunctional landscape structure in the environment, inheriting the cultural memory of the original site (Shanggang No. 10 Factory). As more and more cultural and artistic activities are held here, the old steel factory is full of creativity and fashion breath.

The old materials and old equipment are redesigned by the designer, combined with new design concepts, new materials, and new design methods to realize the conversion between the new and the old, such as the rust steel plate landscape wall of Ludi Terrace in Houtan Park. the broken line in the form of modern modeling techniques used which make it presented a new image, the use of native plants in the park is also reminiscent of the image of the field; in addition, Zhongshan Qi representative River Park "amber water tower"⁷ and "skeleton towers ", using addition and subtraction to transform it, the original common factory water tower has been given a new appearance and connotation, that is, the memory and nostalgia of the past.[8]

4. CONCLUSION

When the era of industrial production and the roar of machines is declining, leaving many environmental and social problems, for these lost industrial wastelands, thinking about the transformation and renewal of industrial landscapes at the level of landscape design is a new way to solve the problem. In the actual case of Houtan Park, the designer renovated the site in terms of sustainable ecology and historical and cultural heritage. In terms of ecology, the construction of inland river wetlands not only solved the problem of water purification, but also had local characteristics. How to combine site memory with modern design techniques, follow an ecological and sustainable design strategy, and create a unique post-industrial landscape is a question that requires designers to think twice.

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