Sustainable planning and management solutions for the flood-damaged cultural landscape of Nan’anzui, Wuhan, People’s Republic of China

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Abstract

Nan’ananzi was a residential area and former industrial workers’ estate located within the city of Wuhan. It is located at the junction of the Yangtze River and its largest tributary, the Han River. This article discusses the methodology applied in planning for and managing this historic area following its destruction by floods in 1998. It argues that implementing the UNESCO Recommendation on the Historic Urban Landscape (HUL) on this kind of demolished area can contribute general guidance on appropriate design and reestablishment. The article begins by outlining the significance of the location and the spirit of the place by introducing the components of the historic layers, and then discussing concerns regarding social inclusion, and community cohesion. Comparative analysis is used to evaluate planning proposals developed from 2000 to the present for the historic area. The article concludes by providing a feasible and sustainable approach to planning and managing for Nan’ananzi guided by both the methodology of HUL and the traditional Chinese concept of Shan-shui.

Key Words: Nan’ananzi, Wuhan, historic urban landscape, historic layering, Shan-shui

Introduction

Located at the junction of the Yangtze River and its biggest tributary, the Han River, Nan’ananzi is now the subject of heated debate and is an unsolved challenge for the city of Wuhan in Hubei Province in Central China.
Before the late Qing Dynasty, Hankow, Hanyang and Wuchang, the three parts of the Wuhan Area, developed at respective pace. Formed in the Han Dynasty, Hanyang and Wuchang shared a history of over 1800 years, yet Hankow, the third component of Wuhan, has only about 500 years of history. The Han River was diverted from the south of Hanyang to the north of Guishan Mountain in the Chenghua Era (1465-1487) of the Ming Dynasty. After the diversion, the shipping conditions of the Han River improved. Meanwhile, the ports in Hanyang silted up, so ships changed to stop at Hankow, making it a new port city.

Nan’anzi got its name during this period. In 1521, the Ming Dynasty Emperor Zhu Houcong started his reign after the death of his sonless cousin, Emperor Zhu Houzhao. People in Wuhan welcomed this emperor-to-be on both sides of the Han River estuary, thus these areas were called Jiejiazui (later changed into Jijiazui by the dropping of the vowel), which meant the river mouth where the emperor’s vehicle was welcomed. Later, the Hanyang side was called Nan(south)an(bank)zui (short for Jiejiazui).

History

In the Late Qing Dynasty, Wuhan’s modernization began when the western countries started to establish concessions in Hankow. It started with the British Concession in 1861, followed by the German (1895), French and Russian (1896), and Japanese (1898). At first, the British Concession selected the site of the Longwang Temple, which is located at the estuary of the Han River directly opposite Nan’anzi. It was the most prosperous place in Hankow and the Wuhan Area because Hanzheng Street, the economic centre at that time, was right next to it. Afterwards the government decided to allocate the unused land alongside the Yangtze River as the concession area. The economic centre slowly moved from the Han River bank to the Yangtze River bank. This also influenced the economic growth of Nan’anzi.

As a leading exponent of the Westernization Movement, Governor Zhang Zhidong arrived in Wuhan in 1889, and started to plan the city. Taking advantage of convenient water transportation, he started to arrange factories on the Han River bank of Hanyang. From upstream to downstream of the Han River, he established a state-run brickyard (1907), a needle and nail factory (1907), an arsenal (1890) and an ironworks (1890). Consequently, Hanyang became an industrial city. Meanwhile, the construction of the port and the docks, as well as the road-widening projects, laid the foundation of the modern city of Hanyang. Along
with those industrial and municipal constructions, modern houses were built in the Nan’anzu area. Xingrenli, the only cluster of ‘lifen’ buildings in Nan’anzu, was built as the workers’ dormitory-style accommodation for the ironworks. The cluster had nearly 100 buildings and was bombarded during the Battle of Wuhan (1938) in the Sino-Japanese War (1931-1945). After that, the area was rebuilt for residential use and was continuously prosperous up until the flood in 1998.

To understand the history of Nan’anzu, good clues can be found firstly in the historical place names. Just like Jiejiazui, two lanes were named Tanjiaxiang (探驾巷, the lane where people asked after information about the emperor’s arrival, later mistaken as Danjiaxiang-弹夹巷) and Baojiaxiang (报驾巷, the lane where people reported the information, which later kept this name but changed the Chinese characters to鲍家巷). The names of these lanes, together with Nan’anzu’s name itself, showed that this place was important in ancient Chinese domestic river transportation. Historical data showed that this area was closely linked to the industrial area in Hanyang and the commercial area in Hankow. On the historic streets, Shuangjie, Hexingjie, Dakouxiang and Baojiaxiang, there used to be more than twenty private factories, producing machines, coins and other materials. This part of history also left its trace in the place names. In 2005, a stone tablet was found on the Hankow side of the Han River, and the inscription on it was ‘Dakouxiang Pier’. According to historical maps, there was a Dakouxiang on both sides of the Han River, opposite one another. Both had a related pier. The Dakouxiang Piers were used to transport goods between the Dakouxiangs.

![Figure 3: Dakouxiangs and piers on both sides of the Han River. (Compiled by the authors).](image)

What is more important? The historical texture of the area, the possible link to the neighborhood, or the contemporary natural environment? Back in the time when Nan’anzu was still prosperous, the area of Wuhan was actually three isolated towns and the rivers were barriers between them. According to the ICOMOS Quebec Declaration (2008), the tripartite structure of the city influenced the ‘spirit of the place’ of Nan’anzu. It was not only the friendly hand of an old port reaching for the commercial root of the history, but also the struggling arm of an ancient town stretched into the booming modern future. However, after the demolition of all the buildings and the erasure of the original urban structure at the turn of the 21st century, it is now more a landscape. Comparing it to the geographic position of Koblenz in Germany, which has the ‘German Corner’, Nan’anzu could be regarded as the ‘Chinese Corner’, and also as ‘Wuhan’s Heart’.
Former planning activities

In 1953 and 1954, the Overall Plan of Wuhan City first set out the axes of the city. The political axis started from the square in front of the Zhongshan Park, continuing all the way to Jijiazi, crossing the Han River to Nan’anzui, crossing the Yangtze River, and ending at Hongshan Square. Also in 1953, the Draft Sketch of the Wuhan City Plan showed a similar political axis, only more detailed. It started from Luojia Moutain Higher Education Area, to Sanhuangdian which was the administration centre of the Mid-South Region, to Yellow Crane Tower, which is near the Yangtze River at the Wuchang Side, to Nan’anzui, to the People’s Square, in front of Zhongshan park, which was the administration centre of Wuhan, and ending in Zhongshan Park.

These plans showed the significance of Nan’anzui. However, after the big flood of 1998, the whole area was dismantled and the planning of this area commenced.

The Planning Phases

Since 1998 there have been over 20 planning and research projects concerning this area in the following four phases.

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In the last 20 years, the Wuhan municipality has been very active in planning this area, and it has been very careful not to build anything in these 20 years.

**The First Planning Competition**

The first round of planning occurred in 2001. To bring together all the possible visions, a planning competition was held by the Wuhan Municipality. Nine design agencies participated in the competition which produced 11 creative solutions.

A Japanese company won the first prize. The design turned the area into an artificial hilly space, which intended to show the links between the river, the bank and the hills, creating an elliptical plaza in the centre. Using a golden roof for the main building, the design intended to make it in harmony with the existing buildings nearby.

After the planning competition, due to the significance of the place, no plan was actually put into practice. However, reviewing them after almost 17 years helps to illuminate how design methods and ideas have changed over this time. These days, light pollution issues are discussed more and more. A golden building on the river front of Hankou is now being criticized. The golden roof, designed by the 2001 winning design, is now not considered harmonious with the river and the environment.

**Current municipal practice**

In 2017, Wuhan’s Municipality brought up the idea of building the Changjiang (the Mandarin of Yangtze) Axis. It refers to the area along the Yangtze River and Han River, formerly known as the Jianghanchaozong Scenic Area, or the Liangjiangsi’an (Four Banks of the Two Rivers, i.e. the Yangtze River and the Han River). Nan’anzui was considered the heart of the Changjiang Axis.

In 2018, Chinese President Xi Jinping raised the topic of Yangtze River Grand Protection, mentioning that there should be no more large constructions along the Yangtze River, and that protection work should be done together by all sectors of society. The Changjiang Axis, representing the centre and the history of the city, is in need of heritage conservation and creative transformation.

Meanwhile, the Wuhan Municipality is also carrying on a Historic City Project (together with the Modern City Project and the Future City Project). Nan’anzui is also the centre of the Historic City, also called the ‘Heart of the Yangtze Civilization’, or ‘Heart of Yangtze’.
This time, another planning competition was held by the municipality. More than 20 design units participated in this competition, and finally four of them were selected. The conceptual design was completed by the end of 2018, and the next step is the practical design.

**A sustainable design solution for Nan’an’anzui: implementing HUL principles and Shan-Shui**

It is already 20 years since the big flood of 1998 and the removal of the older buildings. During these 20 years, the urban appearance and economic power of Wuhan has changed completely. The original city centre is no longer the engine of economic development since the suburban areas have now become professional high-tech industrial areas and modern transportation centres. The plan of the Changjiang Axis, or the waterfront area, should now focus more on human habitation and the interaction between people and the environment.

In May, 2018, UN-habitat launched an International Urban Design Student Competition concerning the Wuhan Guibei Area, and the Nan’an’anzui area was also included. The competition received 53 sets of students’ work including 32 international ones. In Place Making Week in December, 2018, the top three works were selected and were displayed to the public.

The design work also attracted public attention. On Changjiang Net, a local news network, local bureaus interacted with citizens via its Citizen Message Board. More than 50,000 people participated, and the news was read by over 2.24 million people (Yang Wang, 2018).

One of the key issues for planning is to research and rethink the relationship between this specific area (and of course the whole city) and the Yangtze river, from both natural and cultural perspectives. Thus, more detailed research of the area is strongly needed before any design can be put into practice. The Historic Urban Landscape Approach, as is mentioned in the Recommendation on the Historic Urban Landscape (UNESCO, 2011), suggests that:

> Research should target the complex layering of urban settlements, in order to identify values, understand their meaning for the communities, and present them to visitors in a comprehensive manner…It is essential to document the state of urban areas and their evolution, to facilitate the evaluation of proposals for change, and to improve protective and managerial skills and procedures.

Such research could help clarify the overall orientation and development goal for this area. The planning of this area will focus on urban layering, the former dwellers, the current state, and the management of this area in the future. There are several problems to be considered.

**Natural Environment Review**

The city of Wuhan is nourished by the Yangtze River, and it also suffers the disasters, mainly floods, brought by the Yangtze River. The lowest elevation of the Nan’an’anzui area is 26.7 meters (using the Wusong Elevation System of China). In 1931, the highest flood water level was 28.28 meters. In 1954, it was 29.73 meters. In 1998, it was 29.43 meters. The streets and houses were soaked in the water when the flood event occurred and finally the area was dismantled after the 1998 flood. Now the protection levee of Hanyang, with a height over 30 metres, has been built at the south of this area.

This reminds the planners that a large part of this area could be flooded if big floods happen again, since the La Nina Effect that brings more rain and floods now happens more and more frequently. This area should be eco-friendly and recover easily from natural disasters. Using the idea of the ‘Sponge City’ (Kongjian Yu, 2017), infrastructure that can save and store water from the wet seasons or days, for dry seasons or days, could be built in this area.

Considering the flood problems, semi-underground architecture is not suitable in this area. The design of basements should take into consideration the flood threats, and the parking facilities should be arranged carefully. It is better to arrange the parking facilities outside this area and to design good electric vehicle routes for commuters.
Historical Environment Review

As mentioned above, Nan’anzui area, located on the south bank of the Han River, has strong historic links to Hankow, on the north bank. Taking this into consideration, the overall planning of the Nan’anzui area should cover both river banks.

The Longwang (Dragon King) Temple is located right opposite Nan’anzui. It is one of the three major temples for the Yangtze River. Longwang, the Taoism Dragon King, is believed by the Chinese people to have the ability to arrange clouds, to make rain, to eliminate bad luck, and to bring good luck. Longwang is believed to live in the water, and Longwang Temples are built near the water for people to worship. The Longwang Temple in Wuhan was first built almost six hundred years ago, in the Ming Dynasty. It was ruined and rebuilt several times, and the current temple was built in 2005.

Being a commercial Town in the Ming and Qing Dynasties, lots of businessmen from all over China lived in Hankow, building all kinds of temples and guild halls along the Han River. Each temple faced a road, and the road led to a port. The ports are witnesses to Hankow’s former glory. There were also ports in the Nan’anzui area but they were all demolished. Now, most of the ports in Hankow are demolished or changed into modern ones. But near the Nan’anzui area, the Longwang Temple Port and Jijiazui Port have been retained. These ports are historical resources that could be used for identity-making and to benefit the area’s historical environment.

The Adjustment of Traffic

Considering that the Nan’an’zui area is now a scenic point and a future ‘heart of Wuhan’, a well-designed entrance is needed. Thus, accessibility should be the first consideration. The current traffic facilities allow people to enter the area through the Qingchuan Bridge from Hankow, and through the first Yangtze River Bridge from Wuchang. For public transport, buses and metros can reach the nearby area. For pedestrians, it is easy to get to the place via the Qingchuan Bridge from Hankow.

But these are far from enough. Two major problems should be considered. The first one is car-parking, since there’s not enough parking space in this area. The second one is the lack of public transportation. It takes people 30-40 minutes to walk to the place from the two nearest metro stations. Although there are shared bikes in the city that can be used for this trip, the amount of them that are available varies greatly.

For the car-parking problem, a modern parking building could be located outside this area, serving Nan’an’zui together with the nearby Qingchuan Pavilion and the Guibe Industrial Area, using one of the old factory buildings in the area.

Figure 5: Locations of the metro stations, the Qingchuan Pavilion and Guibe Industrial Area.
For public transportation, the Nan’an zu Port could be restored. Using the existing Jijiazui Pier, a ferry route crossing the Han River could be created between Hankow and Hanyang, and people could enter the place directly after getting off the ferry. It only takes people 17 minutes to get from the metro station to the Jijiazui Pier, and entering the area from the river provides a unique experience.

There was a metro line planned to go through this area, but in the fourth round of metro planning of Wuhan, it was cut off. So there will not be further metro access and we need to make good use of the existing infrastructure. Besides the ferry, public shared bicycles can be used for people to get to this area. For several years, shared bicycles have been very popular in Wuhan. Yet the roads still need to be more bicycle-friendly.

**The entrance to the place**

Considering the original urban texture and current needs, the reestablishment of the Shuangjie Street near the Nan’an zu Pier is feasible. Shuangjie Street was once full of stores and factories. The reestablishment could satisfy commercial demands and could also be the waiting zone for the ferry and the catering zone. Public washrooms could also be in this area.

Putting the main entrance at the north side is also in harmony with the spirit of the place. Hanyang is the cradle of a famous Chinese story, the bosom friends, about a music master who finally meets the person who understands the hidden emotion in his music, expressing his feelings to mountains and flowing rivers. When going up to the land from the river, people can see the Guishan Mountain when entering the Nan’an zu area. And when going down to the ferry, people can see the flowing Han River joining the unceasing Yangtze River. There is an old Chinese saying that benevolent people love mountains and wise ones love water. This place is a good expression of the traditional Chinese concept of **Shan-Shui**.

**Function**

The city of Wuhan has built its ‘Centres’ all over the city in the years after the buildings of Nan’an zu were totally demolished. Although Nan’an zu is the real centre of the city, there is no need to make it a Central Business District or Central Cultural District any more. There is already a good waterfront park on the bank of the Hankow part of the Changjiang Axis. What can the new function be?

The design of this area must not focus only on itself. An integrated design is needed for this area together with the Hanzheng Street area opposite the Han River, the Qingchuan Pavilion area along the Yangtze River, and the nearby Hanyangzao Industrial Zone alongside the Han River.

This bigger area represents two of the main characters of Wuhan. The Hanzheng Street area was the biggest small commodity wholesale market, and the Hanyangzao Industrial Zone was one of the biggest and earliest industrial areas in China. Although there are museums showing the history of Wuhan, and the industrial history of Wuhan, there is no museum showing commercial and industrial culture, let alone the demonstration of the city’s spirit.

A Wuhan Culture Museum could be put in Nan’an zu, showing the characteristics of the city, the commercial and industrial culture, the residents, the lifestyle, the relationship between the city and the rivers, etc. The museum should be small and in harmony with the landscape.

**Activities**

There are lots of activities that could be put in this area. There is an existing Hankow Bund Park in Wuhan and it is beloved by the citizens. People like to swim in the shallow water in summer, fly kites in the windy seasons, sing Han Opera or Beijing Opera and do square dances at night. It is a successful example of a multi-generation-friendly public place. Old people could do Taichi in the morning, and kids could play after school. The activities in Nan’an zu area could also include these.
The Qintai Grand Theatre and Qintai Music Hall are found not far from the Nan’anzui area. If there could be a semi-outdoor theatre, performances could be arranged in this area. The intangible heritage of Wuhan could also be displayed or performed in this area. Shops could be opened and the inheritors of the intangible heritage could organize their own activities using the venue provided. This area is also suitable for outside school activities and study tours. Students could have fun sports, natural explorations and cultural explorations.

**Landscape**

High-rise buildings, elevated layers and unusual structures should be forbidden in this area in order not to harm the view corridor from the riverside to the Guishan Mountain. Having a traditional Chinese style Longwang Temple opposite the Han River and the Qingchuan Pavilion in the neighboring area, the new architecture may have some similar characteristics to these two, and may also have some features from the industrial history. But pseudo-classic architecture is not necessary. As mentioned in the Vienna Memorandum (UNESCO World Heritage Center, 2005):

> Historic buildings, open spaces and contemporary architecture contribute significantly to the value of the city by branding the city’s character. Contemporary architecture can be a strong competitive tool for cities as it attracts residents, tourists, and capital. Historic and contemporary architecture constitute an asset to local communities, which should serve educational purposes, leisure, tourism, and secure market value of properties.

In line with HUL principles and also the Vienna Memorandum, modern architecture can also be built in this area.

As is mentioned above, Hanyang had its first state-owned brickyard as early as 1907. The building material for the new culture museum could be bricks produced in this region reflecting the manufacturing culture. Thus, through good interpretation, people can find the link between the past and the present when entering the architecture. In addition, the transition from indoor to outdoor can be realised by a semi-outdoor theatre. Performances in the place of mountain and waters can be an attraction to local people and visitors.

**Conclusion**

In conclusion, we can see from the New Urban Agenda (NUA) (UN-HABITAT, 2016) the shared vision expressed in NUA article 13(b), which points out the significance of making urban spaces participatory. Taking the Nan’anzui area as an example, the public space of the river banks provides an opportunity for all inhabitants of the city to access, to have social and intergenerational interactions, to get close to culture and nature. Thus the sustainable development of this area should always focus on the people, not on the buildings. Although it is not a typical heritage area, since its earlier buildings had already been dismantled, the significance of the place requires an integrated design embracing its history, old urban texture, and the surrounding landscape.

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