

# Reincarnation from Fire

## The Reconstruction Project of the Jianfu Palace Garden

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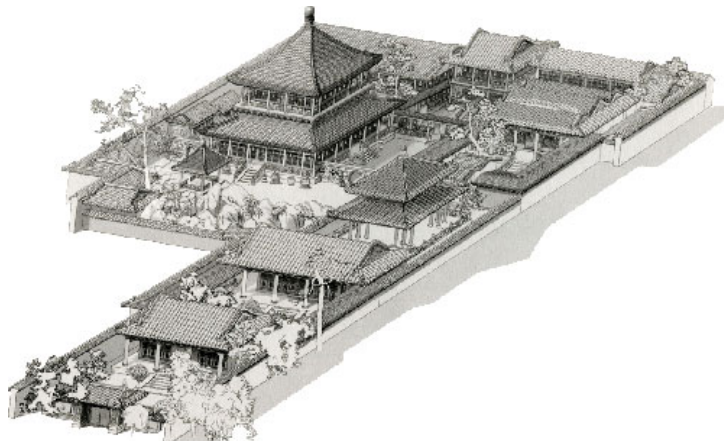
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### Abstract

With the donation from the China Heritage Fund, the Jianfu Palace Garden) of the Forbidden City has been reconstructed 75 years after its razing to the ground by fire in 1923. Using traditional tools, materials, techniques and processes, the reconstruction project not only help the Forbidden City to be a complete royal palace again, but also tries to ensure that the legacy of traditional structural methods live on.

### Introduction

The Jianfu Palace Garden or the Garden of the Palace of Established



*Figure 1: Airscape of the Jianfu Palace Garden, painted by Zhao Guangchao*

Happiness is a part of the Forbidden City. It was the garden attached to the Jianfu Palace. The garden was started to build in 1740<sup>1</sup>, the 5<sup>th</sup> year of Emperor Qianlong<sup>2</sup> took the throne of the Qing Dynasty<sup>3</sup>. The whole construction work lasted for about 10 years.

“Every emperor and ruler must have a garden in which he may stroll, look around and relax his heart, when he has retired from audience and finished his public duties.” Said Emperor Qianlong himself.

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<sup>1</sup> There are different opinions of when the garden was built, 1740 or 1742, for documentation of Qing Dynasty usually gave an ambiguous record about when did the building “be decided to be built” or “begin to be built”.

<sup>2</sup> Emperor Qianlong (1711-1799) was the sixth emperor of the Manchu Qing Dynasty, and the fourth Qing emperor to rule over China.

<sup>3</sup> The last dynasty (1644-1912) of China, which was overthrown by nationalist revolutionaries.

Crisscrossed by pebble mosaic paths and filled with lavish extraordinary rockeries, sunken courtyards and winding galleries, the Jianfu Palace Garden became a favorite retreat. And so pleased was Emperor Qianlong with it that he commissioned an exact replica, Ningshou Palace Garden or Qianlong Garden, on the northeast corner of the Forbidden City nearly half a century later.

But unfortunately, the garden was razed to the ground by fire in 1923. All that remained were cracked stone foundations, plinths and column bases.

## Background

The Forbidden City was the royal palace during the Ming<sup>4</sup> and Qing Dynasties. It has been changed into the Palace Museum since 1925.

It covers an area of more than 780,000 square meters in the center of Beijing, surrounded by 10-meter high walls and 52-meter wide moat. The extant historic buildings within the city account for an area of 159,740 square meters, consisting of 8,728 bays of rooms.

As the largest and most complete timber palace in the world, the Forbidden City presents a perfect combination of Chinese traditional architectural art and crafts. Designated by the State Council as one of China's foremost protected monuments in 1961, the Forbidden City was also made a UNESCO World Heritage site in 1987.

Nowadays, it is a world-famous tour site, over 800,000 tourists visit the Forbidden City last year.

## Geography

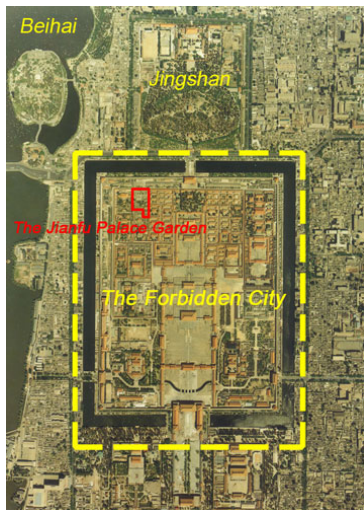


Figure 2: The position of the Forbidden City and the Jianfu Palace Garden

Beijing's longitude is 116°20' east, latitude is 39°56' north. It is located in an alluvial area in the Huabei Plain, surrounded by mountains on north and west sides.

There is a large water area in the center of Beijing, the Mongolian khan ordered to build his royal palace and the capital of Yuan Dynasty<sup>5</sup> around these lakes in 13<sup>th</sup> century. The royal palace of Ming and Qing dynasties, in other words, the Forbidden City also located in this place in order to get enough water resource.

<sup>4</sup> A Chinese dynasty (1368-1644) noted for its flourishing foreign trade, achievements in scholarship, and development of the arts, especially in porcelain, textiles, and painting.

<sup>5</sup> A Chinese dynasty (1271-1368), created by Genghis Khan.

During the Manchu Qing Dynasty, Beijing became not only geographical but also cultural intersection point of the Han, Manchu and Mongol.

### Climate

Beijing's climate is defined as "continental monsoon". The four seasons are distinctly recognizable.

Table 1: Beijing's Climate Data. (Quoted from the website of the Beijing Meteorological Bureau)

Month	Temperature(C)	Rainfall (cm)	Relative humidity
January	-3.7	2.7	44
February	-0.7	4.9	44
March	5.8	8.3	46
April	14.2	21.2	46
May	19.9	34.2	53
June	24.4	78.1	61
July	26.2	185.2	75
August	24.9	159.7	77
September	20.0	45.5	68
October	13.1	21.8	61
November	4.6	7.4	57
December	-1.5	2.8	49

The main characteristic of Beijing's climate is dry and . Rainfall concentrates in two months during summer so that timber buildings always face the problems of crack and fire. We also need to be pay great attention to lightning storm which would cause fire also.

### History

The Forbidden City was originally built from 1406 to 1420 by the third Ming emperor Yongle. He determined to move his capital north from Nanjing to Beijing so as to withstand the attack from the north minorities and protect his large territory of south China.

The Manchu Qing Dynasty kept the main buildings on the central axis and the overall arrangement of the Forbidden City. But the emperors also made some changes to fit the require of politics<sup>6</sup> and life, especially in the period under Emperor Qianlong's reign.

As a governor of Manchu, who used to living and hunting in the virgin forest in north China, Emperor Qianlong loved natural scenes. He also enjoyed the private gardens of Han scholar-bureaucrat in south China. Thus several gardens were built in the Forbidden City during the middle period of the 18<sup>th</sup> century. Jianfu Palace Garden was the very first one of them.

### Changes

#### *The Period of the Forbidden City: Ming Dynasty and early Qing Dynasty*

During the Ming Dynasty and the early Qing Dynasty, there has been a garden in the Forbidden City called the Imperial Garden. But it appears to be more solemn than leisure and comfortable, for nearly all the buildings were arranged symmetrically along the central axis.

To each side of the Imperial Garden, there were five groups of similar courtyard houses. They were so-called the Qian West Five Places and the Qian East Five Places, adding up to ten to imply the traditional Chinses era, Tian Gan.

#### *The Period of the Forbidden City: Middle Qing Dynasty*

Before Qianlong took the throne of the Qing Dynasty, in other words, when he was the prince of the Yongzheng<sup>7</sup> Period, he lived in the Qian West Five

<sup>6</sup> To govern such a large country taken from the Han nationality, the Manchu emperors tried to learn the culture of Han and mixed it with the culture of Manchu. For example, some study rooms were built in the Forbidden City to show the respect of Han culture.

<sup>7</sup> The Yongzheng Emperor (1678-1735) was the fifth emperor of the Manchu Qing Dynasty, and the third Qing Emperor to rule over China. Emperor Qianlong was the fourth son of him.

Places. According to the tradition of the royal family, he rebuilt his old residence to enhance its rank after he became the emperor.

The west two groups of courtyard houses in the Qian West Five Places were ordered to be torn down and changed to be the Jianfu Palace and the Jianfu Palace Garden in 1740.

Emperor Qianlong loved this beautiful garden so much that he put treasures collected from all over the country in it and copied the buildings into Ningshou Palace Garden later.

#### *The Period of the Forbidden City: Late Qing Dynasty*

On the night of June 27th in 1923, when the last Emperor Puyi of the Qing Dynasty still lived in the Forbidden City after being deposed, a fire came up from the Jingsheng Zhai, where was a main storage of imperial collections. The fire overspreaded the whole garden and licked up almost everything,



Figure 3: Comparison between Ming and middle Qing dynasties

buildings, trees and treasures. The only survival was Cunxin Men, which separated the garden from the Jianfu Palace.

#### *The Period of the Palace Museum*

For some economic and legal reasons, the Jianfu Palace Garden had lain untended beneath a pile of rubble for over 70 years after fire. The stone foundation and rockeries have gradually been damaged by exposure, worn and disintegrated.

#### **Architecture**

The Jianfu Palace Garden covered a area of 4,074 square meters, including more than ten buildings of different style and extraordinary rockeries.

With the help of ancient documentation, we knew the name, style, scale and function of the buildings in the Jianfu Palace Garden.

The garden was divided into two parts by the obvious axes. The east part was on the extended line of the Jianfu Palace's central axis, it contains Cunxing Gate, Jingyi Xuan and Huiyao Lou. The west part was organized by refined corridors surrounding YanchunGe, which was the most magnificent building in the garden.



Figure 4: After fire in 1923.



Figure 5: Before reconstruction

Table 2: The Main Building List.(Information comes from the Thesaurus of the Forbidden City)

Item	Storey	Width	Depth	Function
Jingsheng Zhai	One	9 bays	One bay	For keeping and reading books
Yanchun Ge	Two <sup>8</sup>	5 bays <sup>9</sup>	5 bays	Multifunctional pavilion
Jiyun Lou	Two	3 bays	2 bays	Hall for worshipping Buddha
Bilin Guan	Two	5 bays	2 bays	For enjoying landscape
Miaolianhua Shi	One	One bay	One bay	Chamber for worshipping Buddha
Ninghui Tang	One	3 bays	One bay	Hall for worshipping Buddha
Jicui Ting	One	One bay	One bay	For enjoying landscape
Yuhubing	Two	3 bays	One bay	Hall for worshipping Buddha
Huiyao Lou	Two	7 bays	2 bay	Hall for worshipping Buddha
Jingyi Xuan	One	5 bays	3 bays	Hall for sleeping
Cunxing Men	One	One bay	2 bays	Main gate of the garden
Nan Zhifang	One	3 bays	One bay	For servicing and guarding
Dong Zhifang	One	3 bays	One bay	For servicing and guarding

## Problems

If we keep on letting the garden alone, the situation will get worse and worse. But how to treat the garden? There are a series of difficult problems.

### To reconstruct or not

First, there are two kinds of ideas for conservation.

#### *Reconstruct*

There WAS the garden but NOT the ruin in the royal palace from middle to late period of the Qing Dynasty, reflecting the history, culture and esthetics of that time. It should be reconstructed.

But this will conflict with *the Law of the People's Republic of China on the Protection of Cultural Relics*, which forbids any reconstruction work on ruins.

#### *Keep actual status*

The ruin of Jianfu Palace Garden itself carried some historic informations, especially the informations of late Qing Dynasty. It should be maintained as a recordation of history.

But after over 70 years neglect, the information has changed a lot. It can not reflect the truth of 1923. In fact, the ruin hadn't been taken care of after fire. The ashes were sold to antiquaries who got quite a little gold from them later. The historic information was destroyed already.

### How to reconstruct

If we make the choice to reconstruct the garden, there comes a couple of new questiones.

#### *About style*

It had been over 180 year from the garden originally be built to be destroyed by fire, spanning period of seven emperors. There must be some changes during such a long time. Which period shall we reconstruct the garden according to? The period of Emperor Qianlong or Xuantong.

#### *About information*

We have three kinds of information: documentation, ancient paintings and old photographs, the replica Ningshou Palace Garden. We must make sure if these information believable and enough for reconstruction work.

#### *About money*

Maintaining such a big group of timber buildings of the Forbidden City is quite expensive. The fund appropriated by Chinese government every year

<sup>8</sup> Yanchun Ge was a pavilion appears to be two storeys, but there was a interlayer made it three storey practically.

<sup>9</sup> The first floor of Yanchun Ge was five bays wide on the facade and five bays in depth, while the second floor was three by three bays..

mainly used in common repaired work. It's difficult to reconstruct the Jianfu Palace Garden without extra budget.

#### *About method*

The number of experienced craftsmen has decreased recent years. Some traditional materials also become rare and expensive. We must ensure that we CAN reconstruct such a group of historic buildings in the garden by traditional techniques, tools, materials and processes.

## Answers

### **To reconstruct or not**

The answer of this question based on the evaluation of the garden.

- As the largest and complete timber royal palace in the world, the value of the Forbidden City primarily based on its wonderful arrangement of buildings. The Jianfu Palace Garden is a indispensable part of the the whole city.
- The place where the garden located in had been changed several times during the Ming and Qing dynasties, deep research of the garden will show important historical, cultural, and aesthetic conception of the two dynasty.
- Although the traditional structural method are still in use today, but no one knows exactly whether we can reconstruct such a wonderful palace as the Forbidden City or not. Reconstruct the garden from A to Z is a great chance and challenge to test the method we mastered.

### **How to reconstruct**

#### *About style*

The most complete and magnificent period of the Forbidden City is in the middle of the Qing Dynasty. Built by Emperor Qianlong, the garden reflected the idea and technique of gardening of that time.

#### *About information*

Although most of the documentation about the Jianfu Palace Garden was text, but we can get exactly the information as follows:

- The name, scale, rank, function and changes of the buildings.
- The shape and color of the roof, the style the paintings.
- PART of the interior furnishings and exterior environment.
- The name, quantities and producing area of materials.
- Part of the structural technique.

Another important information we can make sure from those texts is that the buildings in Ningshou Palace Garden was copied from the Jianfu Palace Garden. The Ningshou Palace Garden is complete and in good condition now.

*Table 3: The original shape of buildings in the Ningshou Palace Garden.*

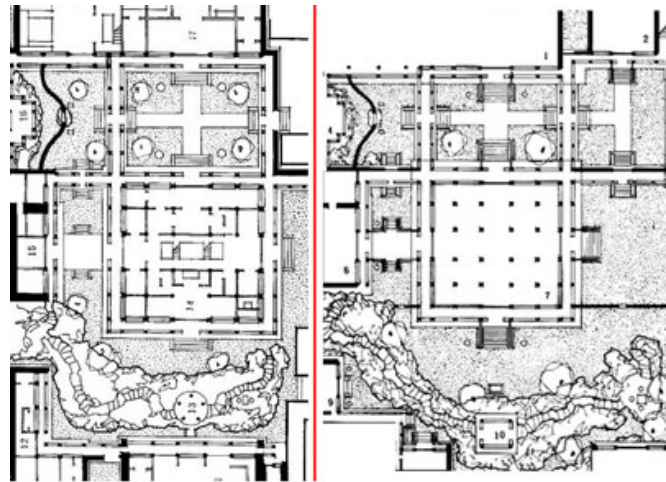
<b>Buildings of Ningshou Palace Garden</b>	<b>Buildings of Jianfu Palace Garden</b>
Fuwang Ge	Yanchun Ge
Juanqin Zhai	Jingsheng Zhai
Zhuxiang Guan	Bilin Guan
Yucui Xuan	Ninghui Tang
Yunguang Lou	Yuhubing
Jingfu Gong	Jingyi Xuan
Fanhua Lou	Huiyao Lou
Fori Lou	Jiyun Lou



During the reigns under Qianlong, China was prosperous and powerful, court artists used a quite realistic method called “Jie Hua” (something looks like axonometric drawing) to record the peaceful scene of that time. The black-and-white pictures taken in the Forbidden City in late Qing Dynasty



Figure 6: *The Peace for New Year*, painted by Ding Guanpeng in Qing Dynasty, the National Palace Museum, Taipei.



Part of Ningshou Palace Garden

Part of Jianfu Palace Garden

Figure 5: Comparison between the Jianfu Palace Garden and the Ningshou Palace Garden

also provided irrefutable evidence of the building’s aspect.

#### *About money*

As a world-famous heritage and the most important symbol of China, the Forbidden City has a great superiority to attract attention and finance.

#### *About method*

After the Ministry of Works in Qing Dynasty issued *the Principle of Construction* in 1731, the buildings especially imperial buildings became increasingly standardized.

- Wood structure: A unit called “Dou Kou” was confirmed as the basic unit of the whole wood structure. It’s easy to calculate all the other dimensions from it.
- Tile: There was a series set of glazing tile pieces, which size varied from 2 to 9. One piece of the tile can decide the dimension of all the others.
- Painting: The style of the paintings were restricted by the rank of the buildings according to the principle.
- Stone: The proportion of the whole building usually can be calculated by the dimension of the stone foundation. Fortunately, the stone foundation in the Jianfu Palace Garden was basically complete.
- Arts and crafts: The traditional architecture principles passed from father to son or master craftsman to apprentice often without benefit of written manuals or scale drawings. The artisans knew all the designs from experience and applied them in stone work, wood work, tiling and painting.

Now, we can draw a conclusion that we should and we can reconstruct the buildings Jianfu Palace Garden according to the aspect of Qianlong Period, by using traditional structural method. But still have two difficult problems: one is to get the permission from the government for its conflicting with *the Law of the People’s Republic of China on the Protection of Cultural Relics*, the other is we have not enough evidence to recover the interior furnishings.

## Method

The reconstruction plan will be carried out as follows: at first, we need two working groups. One is for collecting information, the other is for surveying.

### Information and survey

#### **Ancient literature**

There are mainly four kinds of ancient literature on this subject.

- *The Research of the Historic Record of Beijing*
- *The History of the Royal Palace*
- *The Narration of the royal palace of the Qing Dynasty*
- *The Compile of Poems and Articles Written by Emperors of the Qing Dynasty*

#### **Royal documentation**

There are piles of detailed documentation about the Jianfu Palace Garden issued by the Household Ministry of Qing Dynasty.

- *Memorial to the Throne by the Household Ministry*
- *The Archives of the Expenditure by the Household Ministry*
- *The Archives of Furnishings by the Household Ministry*
- *The Archives of Handicraft Work by the Household Ministry*

#### **Ancient images**

##### *Ancient paintings*

We got several ancient paintings about the Jianfu Palace Garden. The most important one of them was a “Jie Hua” called *the Peace for New Year*, painted by a court artist named Ding Guanpeng, describing the Jianfu Palace Garden clearly.

##### *Old pictures*

When late Qing Dynasty, photography was introduced to China and soon became the favourite of the royal family. Some pictures taken at that time provided the style and scale information of the Jianfu Palace Garden. Including an aircscape of the Forbidden City taken by French pilot in 1900, and a clear picture of Yanchun Ge taken in 1922 by Osvald Siren, a professor of Stockholm University, Sweden.

There is an interesting needs us paying attention to. The color of roofs are opposite in the images of middle and late Qing Dynasty. For example, the roof color of the main building Yanchun was yellow with blue edge in the painting *The Peace for New Year*, but changed to be blue with yellow edge in the drawing, painted by a royal architect family in late Qing Dynasty. It can be seen clearly from the black-and-white pictures. But when we check the colourful map of Beijing drawn in Qianlong Period and the real color of the Ningshou Palace Garden, we can confirm that the garden had been reconstructed sometime after originally built. Now, for we decided to recover the aspect of middle Qing Dynasty, so the color should be yellow with blue edge.





Figure 7: A drawing of Jianfu Palace Garden reconstruction work in late Qing Dynasty, painted by the royal architect family, Yanqshi Lei family.



Figure 8: Pictures of the Jianfu Palace Garden, taken by French pilot in 1900.

### Correlative research works

There are some papers about the Jianfu Palace Garden and Ningshou Palace Garden. Experts of architecture, history and art have done some research work about the two garden, providing hints for us to reconstruct the buildings.

- Fu Lianxing and Bai Lijuan, *The Ruin of Jianfu Palace Garden*
- Zhou Suqin, *The research of time when Jianfu Palace and its garden originally built*
- Nie Chongzheng, *Paintings on the walls and ceilings in Juanqin Zhai*

### Survey

The survey work concludes two parts, one is to survey the ruin of the Jianfu Palace Garden, the other is to survey the buildings in the Ningshou Palace Garden.

#### The Jianfu Palace Garden

- Clean up the ruin and investigate: environment, foundations, materials, etc.
- Measure the stone foundations, plinths and column bases.
- Record actual status by pictures and videos.
- Create vector drawings by AutoCAD

If possible, it will be much better to record the actual status by 3D laser scanner. So we can get more detailed information of the stone foundations fast and easily, also can rebuilt the ruin as a 3D model in virtual reality world. Thus people will get the information what the garden looked like when here was a ruin.

#### The Ningshou Palace Garden

- Investigate the garden: environment, foundations, materials, etc.
- Measure the buildings.
- Record actual status pictures and videos.
- Create architectural drawings by AutoCAD.

Based on these survey works in the two gardens, it's necessary to set up a database. Not only for managing the reconstruction work, but also benefiting to future conservation and management.

### Design

Based on the information and survey, design work will be carried out by five steps.

- Conservation design: to preserve the stone foundations.
- Architecture design: to reconstruction the buildings, the wood structures, roofs, exterior paintings, etc, according to the traditional design method.
- Fitment design: to recover the interior space, including ceilings, partition walls, furnishings, etc.
- Equipment design: to fit the building with modern equipment, water supply and drainage, power supply, heating, aeration, surveillance system, fire protection system, etc.
- Environment design: to finish the whole garden, pebble paths, rockeries, plants, etc.

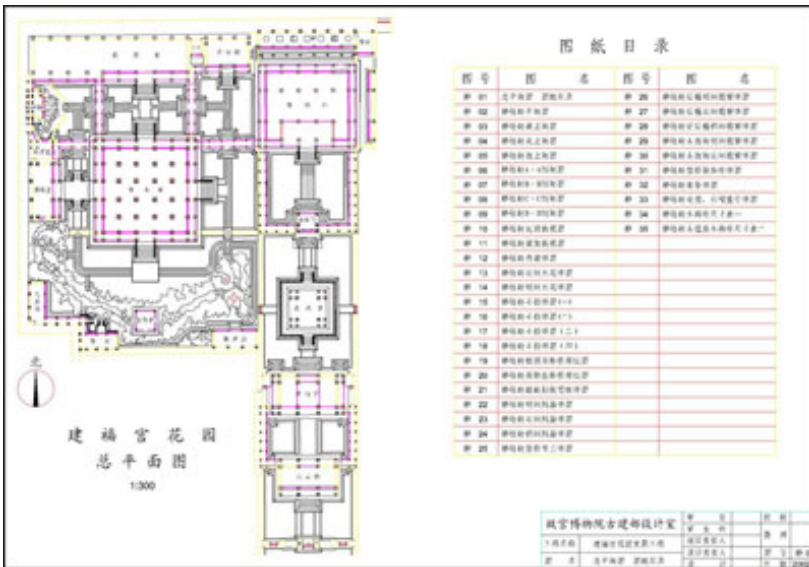


Figure 9: Drawing catalogue of architectural design for Jianfu Palace Garden

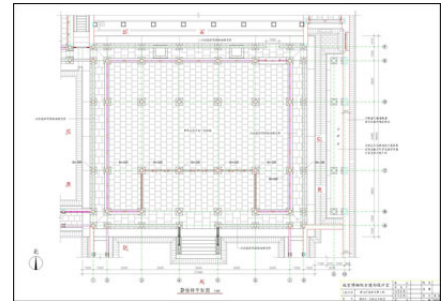


Figure 10: Drawing\_1 of architectural design for Jianfu Palace Garden

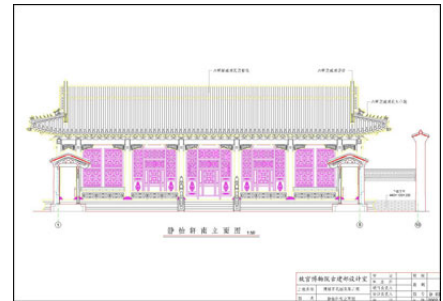


Figure 11: Drawing\_2 of architectural design for Jianfu Palace Garden

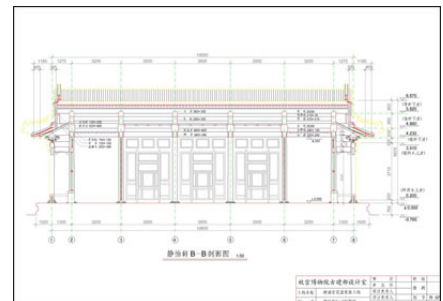


Figure 12: Drawing\_3 of architectural design for Jianfu Palace Garden

### Budget

A general budget need to be made at the very beginning of the project, for each step of work need money, such as collecting information, setting up database, measuring, designing, etc.

After designing, more detailed budget of construction work need to be made. Including materials, labour cost, equipment, etc.

### Preparation

#### Materials

Authentic building materials recorded in the documentation will be sourced from far and wide.

- Stone: Marble from Fangshan in Beijing's outskirts, where had supplied the stone for the Forbidden City when it was first built in the early 15<sup>th</sup> century.

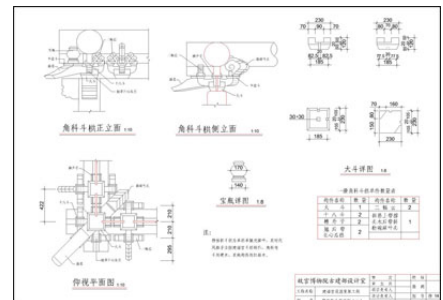


Figure 13: Drawing\_4 of architectural design for Jianfu Palace Garden

- Brick: The so-called “golden bricks<sup>10</sup>” from age-old kilns in Suzhou, favored with an imperial appointment as early as the Ming Dynasty.
- Tile: Glazed tiles from Anhe for the swooping roofs. In fact, there was a kiln in the Forbidden City in early Qing Dynasty. It produced the glazed tiles. But later it was moved to Anhe in the outskirts of Beijing.
- Timber: Massive trunks of cedar and Korean pine from China’s northeast provinces. The timbers usually need to be put away for at least two years, in order to get rid of the moisture and the stress in the wood.
- Colors: The natural mineral colors are still in use today, but some kinds of them have been very difficult to get, so we have to use some kinds of chemical colors instead of the traditional ones.

### Builders

Teams of carpenters, masons, tile workers and painters, using traditional tools, techniques and processes need be marshalled to reconstruct the garden.

It’s quite important to set up a quality control system to manage structural works today. Formerly, the artisans got their technique from their families or elder craftsmen, there wasn’t statute standard of quality controlling but cruel reign of the emperors. Nowadays, to ensure the quality of the reconstruction work and traditional structural method live on, we need modern method to manage the traditional process.

### Reconstruction work

For the Jianfu Palace Garden is a relatively large group of buildings, the reconstruction work should be divided into some stages. Then according to the time limit, carry out the whole reconstruction work.

For each building, the reconstruction work will be carried out as follows:

- Repair or replace the stone foundation, plinths and column bases.
- Construct the wood structure.
- Build the glazing roof.
- Exterior ornament and painting.
- Interior ornament and furnishing.
- Fix modern equipments, the pipes and switches for equipment need to be considered in advance when construction work was carrying out.
- Finish environment.

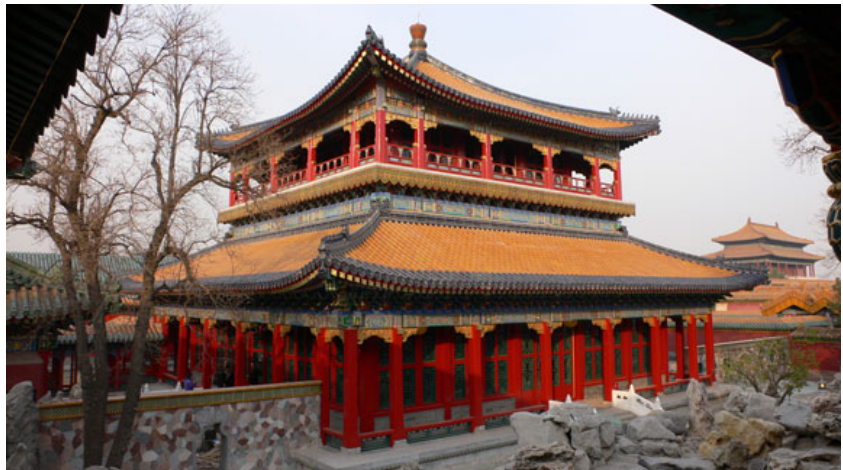


Figure 14: After reconstruction work\_the central building of the Jianfu Palace Garden, Yanchun Pavilion.

10 A kind of high quality brick has been used in the Forbidden City since the Ming Dynasty. When knocking on it, the voice sounds like metal, so people called it “golden brick”.



## Results

Carrying the reconstruction work as mentioned above, we can recover the exterior aspect of the garden successfully. To deal with the interior space, my opinion is to reconstruct the ceilings, wood partition walls, paintings and then use it as exhibition halls, as we usually did before.

But in fact, with US\$4 million as the finance of the first stage from the China Heritage Fund, this exquisite Garden has already risen again from the ashes. And the idea of interior furnishing is pretty good to reincarnated the old garden.

### Outline of the reconstruction work

- After a year of serious argumentation, the reconstruction project was finally decided, and got the admission from the State Council of the People's Republic of China.
- More than ten experts worked for 3 months to collect historic information over 500,000 characters. All the data was compiled to be a reference book.
- The reconstruction project was based on the historic documentation, the remained stone foundation, the vestige left on the palace wall, and the replica Ningshou Palace Garden.
- A famous expert of stone, John Sanday, who works for Angkor was invited to help conserving the stone foundation. He insisted on preserving original stones carefully instead of changing them by new marbles at large-scale. Experiment was done to prove the stones being repaired could sustain the heavy load above. Only the stones could not be used anymore was changed by new ones.
- It's quite difficult to reconstruct the furnishings indoors for lacking of information. At last a modern design project was selected to made the garden a group of VIP chambers, so that the garden could be maintained in an active way. All the modern facilities are reversible.
- Some of the wood structure was not painted and exposed in order to show the beauty of the wooden structure of historic buildings. Some ideas of the interior color comes from the grounding of the paintings in order to show the procedure of paintings. Their aim is to make the garden not only a reception place, but also a exhibition of traditional architectural process.

### Significance

- It's a good work to use traditional method to reconstruct such a big group of royal buildings, accumulating skills for the conservation of the Forbidden City.
- It's a interesting dialogue between traditional shell and modern core. Not only reproduce the historic buildings, but also gave it new "life".
- It has recalled, experimented and handed on the traditional architectural method.
- It has become a wonderful exhibition of traditional architectural arts and crafts, bring new thoughts and new function to the Palace Museum.

## Conclusion

- It's important to ensure the arts and crafts live on.
- It's important to record the information of inner space.
- It's important to set up a morden managing system to control the traditional structrual process ensure the quality.



Figure 15: Modern furnishings in the Yanchun Pavilion



Figure 16: Wooden structure of the Yanchun Pavilion



Figure 17: Preservation of the original brick in Jinashena Zhai

- Traditional arts and crafts need combine with modern thoughts in conservation work, to help the historic buildings LIVE on.
- Modern digital technique will play important role in investigating, recording and transmitting the information of historic buildings.
- The ultimate target of our work is to conserve and transmit the culture, we need regard our object as a carrier of culture.

## References

Edited by The Workgroup of the Reconstruction of the Jianfu Palace Garden  
2000 *The compilation of Literature of the Jianfu Palace Garden in the Forbidden City.*

Edited by Liang Sicheng

1981 *The Construction Principle and Example of Historic Building in Qing Dynasty.* Architectural industry Publications, Beijing.

Edited by Wan Yi

1996 *Thesaurus of the Forbidden City.* Wen Hui Publications, Shanghai.

Edited and Translated by Wang Dianming and Wang Qihua

2005 *A Chinese English Glossary of Cultural Relics and Archaeology.* Zi Jin Cheng Publications, Beijing.

## Appendix 1

## A CHRONOLOGICAL TABLE OF EMPERORS IN QING DYNASTY

Emperor	Name	Living Period	Reigning Period
Shunzhi	Aixinjueluo Fulin	1638-1661	1644-1661
Kangxi	Aixinjueluo Xuanye	1654-1722	1662-1722
Yongzheng	Aixinjueluo Yinzhen	1678-1735	1723-1735
Qianlong	Aixinjueluo Hongli	1711-1799	1736-1795
Jiaqing	Aixinjueluo Yongyan	1760-1820	1796-1820
Daoguang	Aixinjueluo Wenning	1782-1850	1821-1850
Xianfeng	Aixinjueluo Yizhu	1831-1861	1851-1861
Tongzhi	Aixinjueluo Zaichun	1856-1874	1862-1874
Guangxu	Aixinjueluo Zaitian	1871-1908	1875-1908
Xuantong	Aixinjueluo Puyi	1906-1967	1909-1911

## Appendix 2

## THE TABLE OF TIAN GAN AND TI ZHI SYSTEM

The Tian Gan	Signification	The Di Zhi	Signification
(Jia)	First	(Zi)	Rat
(Yi)	Second	(Chou)	Ox
(Bing)	Third	(Yin)	Tiger
(Ding)	Fourth	(Mao)	Hare
(Wu)	Fifth	(Chen)	Dragon
(Ji)	Sixth	(Si)	Snake
(Geng)	Seventh	(Wu)	Horse
(Xin)	Eighth	(Wei)	Sheep
(Ren)	Ninth	(Shen)	Monkey
(Gui)	Tenth	(You)	Cock
		(Xu)	Dog
		(Hai)	Pig

## Appendix 3

## THE TABLE OF BUILDING'S AREA OF JIANFU PALACE GARDEN

Buildings	Signification	Area (m <sup>2</sup> )
Jingsheng Zhai	Studio of Esteemed Excellence	351.68
Yanchun Ge	Pavilion of Prolonged Spring	992
Jiyun Lou	Tower of Auspicious Clouds	181.34
Bilin Guan	Lodge of Viridian Jade	54
Miaolianhua Shi	Chamber of Buddha's World	29.55
Ninghui Tang	Hall of Concentrating Brilliance	95.52
Jicui Ting	Belvedere of Abundant Greenery	30.25
Yuhubing	Chamber of Crystalline Purity	167
Huiyao Lou	Tower of Illuminating Wisdom	166.6
Jingyi Xuan	Pavilion of Tranquil Ease	403.80
Cunxing Men	Gate of Preserving Integrity	129.40

The total area of buildings in the Jianfu Palace Garden is 2808.98m<sup>2</sup>, including the verandas, attaching rooms,ect.

## Appendix 4

## THE TABLE OF TIME STAGE OF RECONSTRUCTION WORK

Date	Buildings being reconstructed
May,2000-Dec,2001	Yanchun Ge
Jun, 2001-Jul, 2003	Belin Guan, Jingsheng Zhai, Jicui Ting, Ninghui Tang, Nan Zhifang, Miaolianhua Shi, East Varandas, West Varandas
Sep, 2002-Aug, 2004	Jingyi Xuan, Huiyao Lou, Jiyun Lou, Jing Shi, Cunxing Men and verandas between buildings
Oct, 2004-May, 2005	Yuhubing

Information offered by the China Heritage Fund