



**Planning and Design of Ganglang Wetland Historical Town**  
**A Solution for Historical Water Towns Development in China's New  
Urbanization Age**

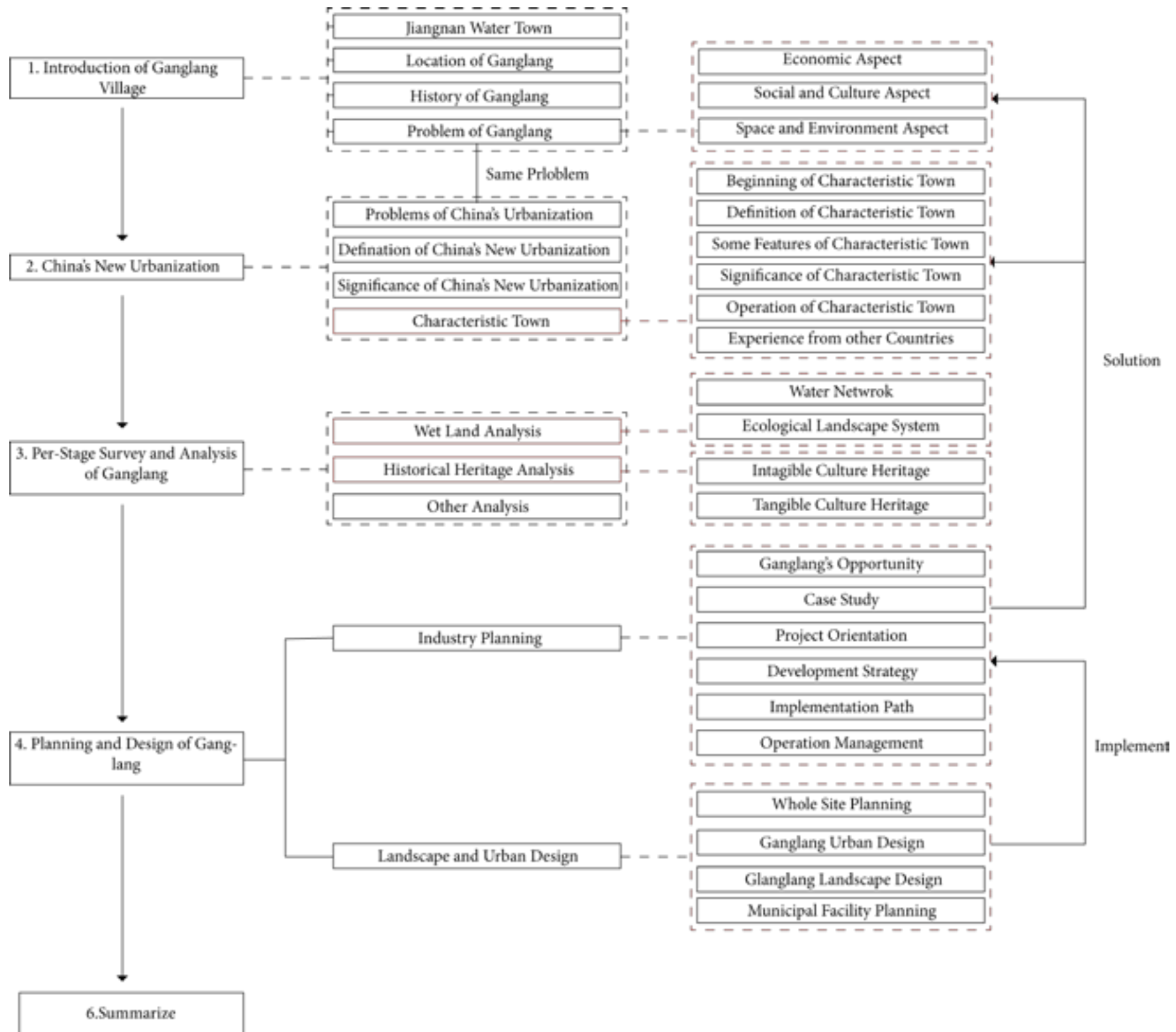
**Abstract:**

This thesis will discuss about the new development of those historical towns by using Ganglang as an example. Start from analysis Ganglang, an actual case, to understand the economic, social and cultural problem that China's villages are facing now, than bring up the concept of China's New Urbanization and one popular, also practical policy, "Characteristic Town". China now has moved into a new urbanization stage, which is to coordinate the development between villages and big cities. Since then, developing small towns or villages has become a relevant matter also a hot topic in china's urbanization. In the meanwhile, many of the villages hold the value as culture heritage in China. Under those encouraging policy, the little town and village project are carrying out fast in China, and Ganglang Wetland Historical Town is one of them and it is a typical water town in Jiangnan area. The Project comes with two major parts, industry design and space design. The industry design is the overall guiding book for the project, in which containing the solution for economic, cultural and social problem. The space or environment design is the implementing book for the industry design, it indicates the plan on space level and be done very comprehensive. Both the industry design and space design are essential for the project. In the last part of the thesis,, summarize some principles of planning and design for the little town in China by my understanding. The thesis is a deep discuss and exploration on nature feature, historical heritage preservation and the future path for the small towns or village in China's new urbanization age.

Key words: China's New urbanization, Little town/villages planning and Design, Historical town preservation, water town, wetland



**Thesis Structure:**



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# 1.Introduction of Ganglang

Ganglang Village, as a typical water town village located China Jiangnan area, have been facing some problematic situation within the process of China's urbanization, but it is also obtain great potential for the China's new urbanization opportunity.

# 1.1 Jiangnan Water Town

Ganglang is a typical water town in Southern Yangtze River. In the beginning of the thesis it is necessary to define clearly the water town concept. This section will give reader a general idea about these water towns, including its location, history, settlement feature and space development.



Jiangnan in the traditional Chinese drawing  
[www.baidu.com](http://www.baidu.com)



### 1.1.1 Location of the Water Towns

In Chinese, “Jiangnan” is a special phrase given to the area of these water towns located. Since ancient time, the word “Jiangnan” would appeared in so many famous poetries and remind people of the beautiful scenery in Southern Yangtze River.

It can be tell from the Chinese phrase that “Jiangnan” means the area in the south of middle and lower part of Yangtze River. The water towns in Jiangnan is the main subject of the thesis, so need to be defined clearly. The refer to the Yangtze River delta area and Tai Lake water network.



Area of Jiangnan  
Made by author

## 1.1.2 History of the Water Towns

The history of this Jiangnan can trace back to the Hemudu Culture seven thousand years ago. Due to the natural advantage, for instance the warm climate, adequate water supply and fecund soil, ancestor chose this place to start their life. In Shang Dynasty (B.C. 1600-B.C. 1046), this place has become a big residential settlement. Since Han Dynasty (B.C. 202-202), there started to have government officials to live here and during the war period (220-589), the unstable situation in the north made people move to the south, which helped the development of economic and culture in the south. Not long after that, the economic center moved from north to south. Then in Tang Dynasty(618-907), there has formed massive official residence and occurred in the drawings in Song Dynasty(960-1279).

With the capital moving to Hangzhou, Jiangnan became the center of politics, economic and culture. Than came to Ming and Qin Dynasty, Jiangnan has become the most developed area in the nation, many influential chose to build their residence here.

Due to the large population, the space was valuable. The Jiangnan building is designed to save space and high level which form the delicate architecture style in Jiangnan area.



“Along the River During the Qingming Festival”  
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### 1.1.3 The Settlement Feature of the Water Towns



Nanxun Water Town Settlement  
Photo made by a

The settlement site chooses in Jiangnan follows the functional principle. The villages are built near the water which convenient for living and production activities. The ancient Chinese economic based on agriculture and the sources of irrigation water is the constraint of agriculture development. The land near the water is rich and good for planting. Also, water plays an essential role in daily life, people need to drink, cook and clear, all of these have to be done near water. Water is also good for transportation. In the ancient days, the land vehicle can not carry much cargo, use experience was bad and many place can only be reached by water way. Compare to the land transport, water transport can carry more cargo and the more faster and safe. So by that time, water transport is the most common way to carry goods and travel. Sit in the area with lots of water network is good for residents to travel and can take this advantage to develop commerce and trade.

The settlement near water also need to consider the flooding issue. The historical villages were build next to the river. In order to prevent flooding in rain season, the settlement layout needs to keep a certain distance with the water way and parallels with it. The villages can not be built in the site with lower elevation compare to the water, it has be higher. So when the rain season comes, rain water fill the water way, the water will not come into the village.

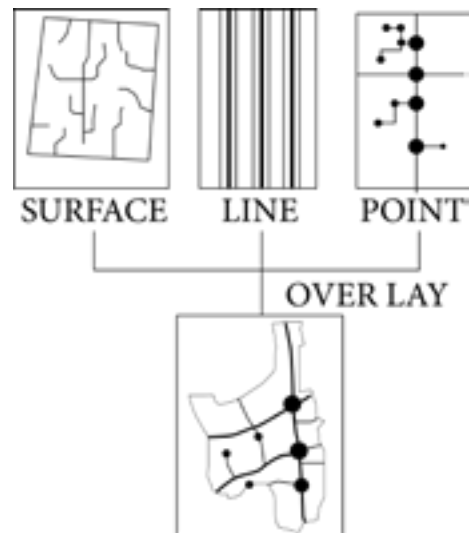
Another function for water towns is to protect themselves from enemy. The terrain for water town is easy to defend but hard to be attacked. The residences in water town use this advantage to build artificial river way to form a circle outside the village and also make a wall inside the river way. It can protect its own people inside and in the same time keep the outside enemy away.

The settlement also follow the instruction of “Fengshui” and aesthetics. But those are not much related to the subject in these article, so won’t explain here.



## 1.1.4 The Space Development

Water town is a complicated system and its development is effected by outside situation and inside factors. The nature conditions is the base of the town forming, social and culture environment is motive power for development. Due to multiple reasons, the water town have went through a long period evolution process, which is from “point ” to “line” than to “surface”. (Duan & Song, 2002).



Space development process  
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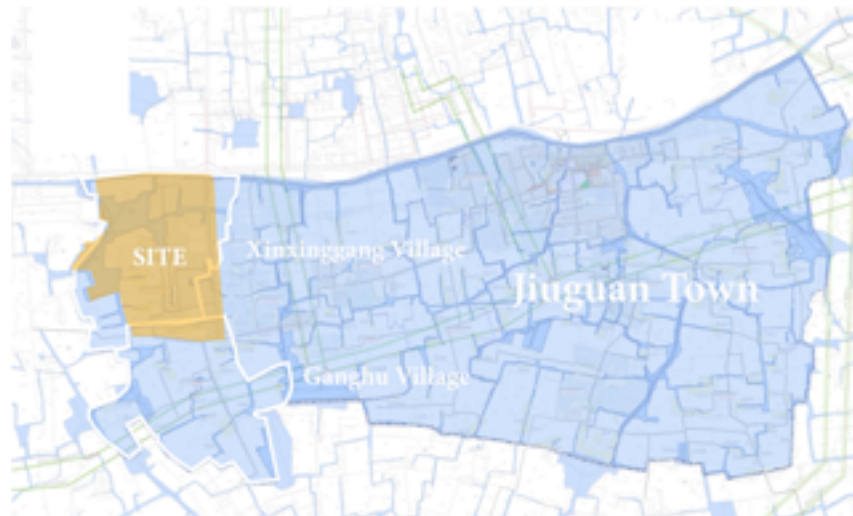


Aerial photography of water town Wuzhen  
www.baidu.com

Water town rosed along side the river and development along with the river. In the beginning, there was only a few resident points built up next to the river. Than those residents point extended gradually and connected with each other along side the river way, which formed a residents belt along side the river way. Living activities and production activities were all related to this belt, it is kind like the plaza in the modern city. In the beginning of building the village, the single house was built with narrow wide and long depth and each household built right next to each other, than after ten households there will be one spindly street. This street will help the residents who located in the further area from the river to get water and got connect with other residents, also it is a fire preventing measure. The houses and shops are layout right next to each other alongside the river or street to form a “front- streets, back-river” or “front-shops, back-houses” village layout, which make the whole village reachable through water and streets. The residential belt continue to grow, gradually became a residential surface with high density and high utilization rate.

## 1.2 Location of Ganglang

The project site includes Xinxinggang Village and a part of Ganghu Village, Located in Jiuguan Town, Nanxun District, Huzhou City, Zhejiang Providence, South side of Lake Tai. In the thesis, for short, call the area Ganglang. wThe site is 120 km far from Shanghai on the east, 56 km far from Suzhou Providence, 100 km far from Hangzhou on the south. On the west side of the site is the Wuxing district and on the east side is the historical Nanxun Town.



Site location in Jiuguan Town  
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Site location in China  
*Made by author*



Site location in Zhejiang Province  
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Site location in Huzhou City  
*Made by author*



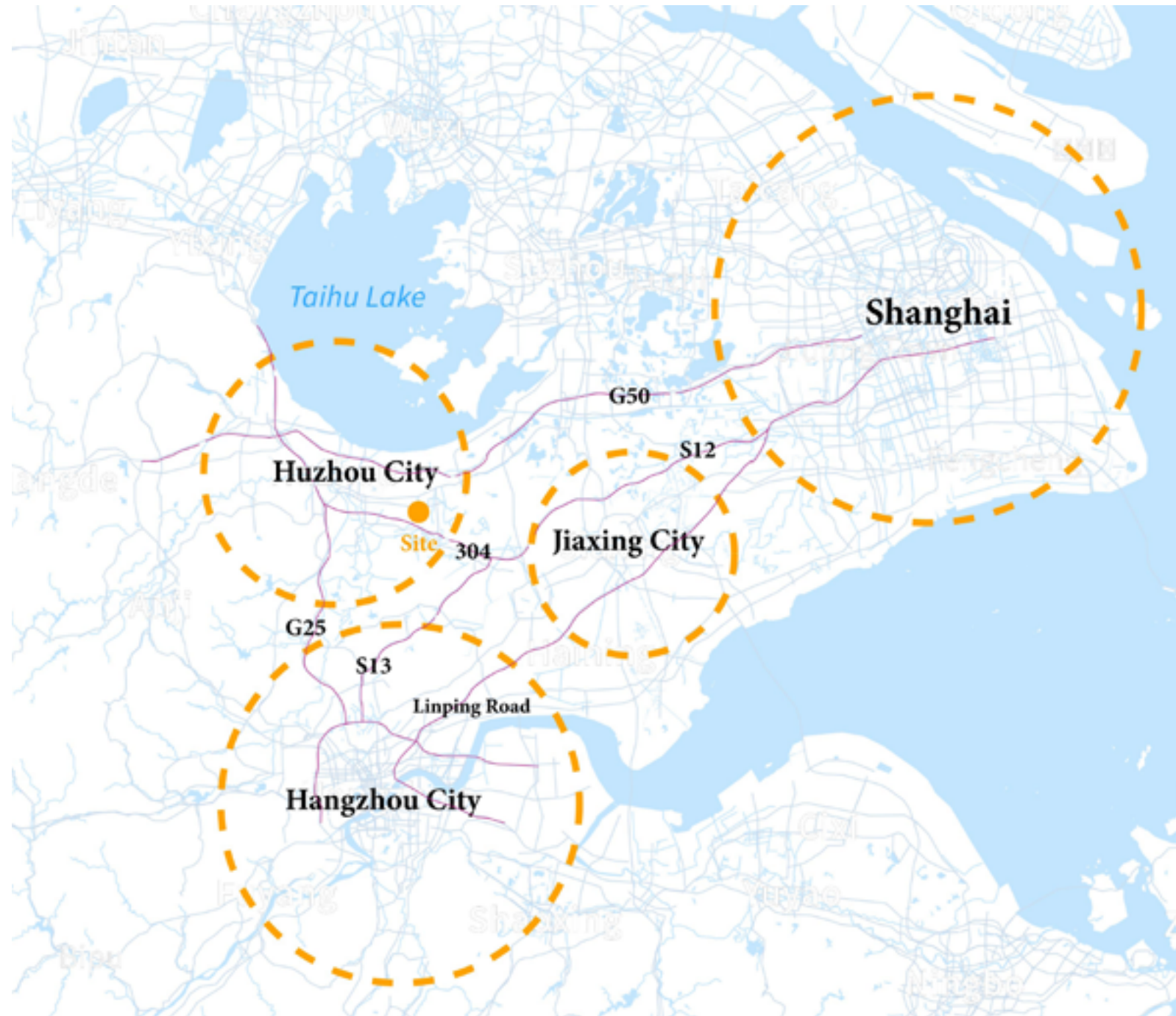
Site location in Nanxun District  
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Satellite Image of Ganglang  
*Made by author*

Xinxinggang Village and Ganghu village are located on most west side of Giuguan Town. 318 national fast way go through two village from the middle.



Highway connection among site and nearby main cities  
*Made by author*

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## 1.3 History of Ganglang

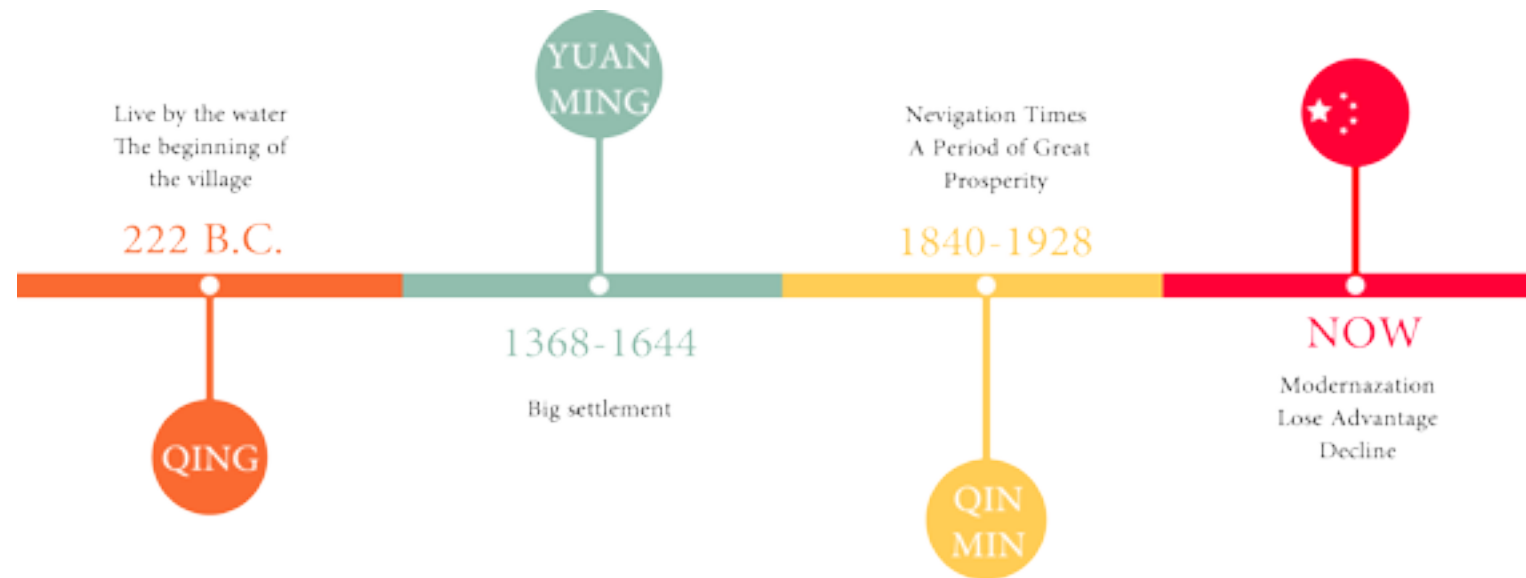


Image 3.1.3.1 Time line of the Villages  
*Made by author*

### Villages started in Qin Dynasty

These villages can be traced back to 222 B.C., the Qin Dynasty. Back that time, this area started to be called Xinxinggang Town and had people lived here. The area is surrounded by water and the terrain is plate, ideal environment for living and planting.

### Villages in Yuan and Min Dynasty

In the end of Yuan Dynasty and the beginning of Min Dynasty (1368-1644), there are big village settlements in the area, it is be told that it was the pirates who came here from the sea, in order to elude their enemy.

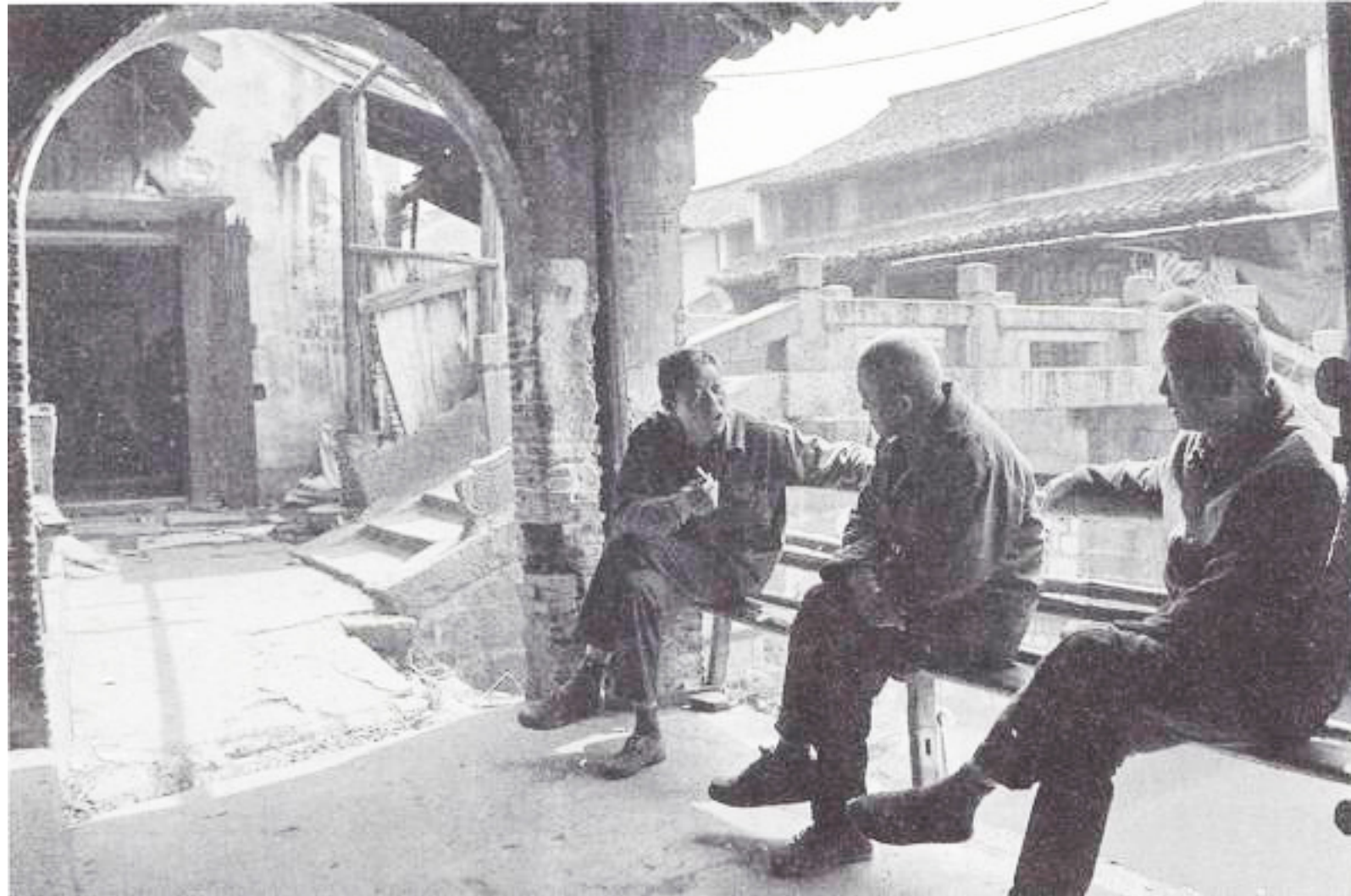
### Villages in Modern Times

In the end of Qin Dynasty and the beginning of the Republic of China, it was a time that navigation was the main transportation in the Yangtze River delta and it was also the Prosperous time for the villages. Markets were gathering here, also was an important cargo distribution location. People came here to shopping; celebrate festivals, meeting neighbor and friends. It used to be the economic and culture center, the best time of it.

### Villages Nowadays

Now, with the development of the modern transportation, industrialization and urbanization, other villages with good traffic connection has been exploited their potentialities, for example travelling. Xinxinggang Village and Ganghu Village don't have the advantage anymore so been forgotten by the world.





Old photo of Ganglang in the 80's  
Elder chatting on the long corridor in Ganglang  
[www.baidu.com](http://www.baidu.com)

## 1.4 Issues of Ganglang

Ganglang is an inconspicuous place. In the background of China's urbanization, here seems to be forgotten by the outside world. There isn't too much information on the sky, so in order to do survey for the project, we paid a few visits to the site. In the field trip, we visited almost every place in the villages and talked to local people and the governor, then came to a better understanding of the place and issues here.



Picture of Ganglang  
Field Trip Photo  
*Took by Author*

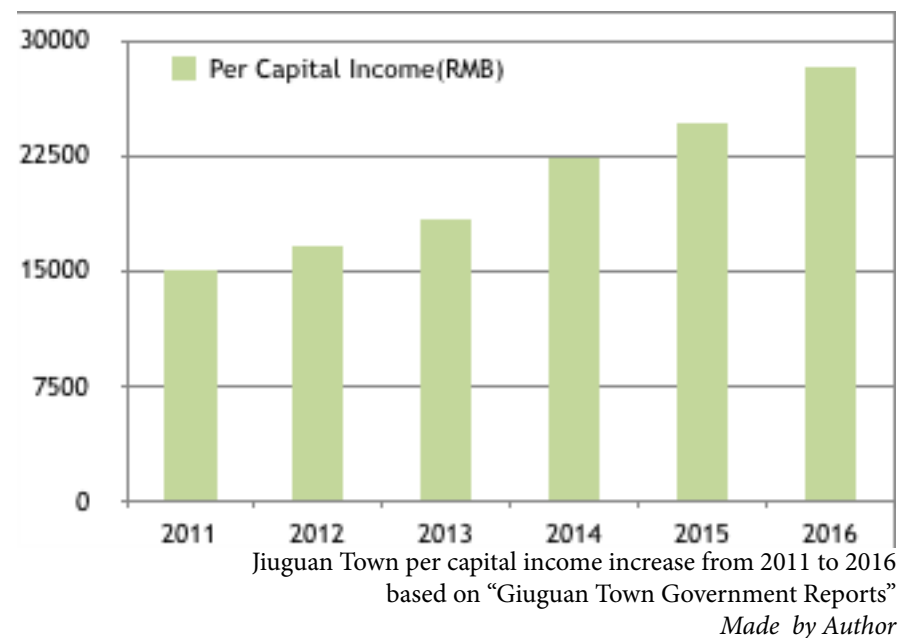


### 1.3.1 Economic Aspect

Jiuguan Town always encourages its people to create their own business and famous for wood floor production industry. The industry-based economy, lead by “Production base of wood floor”, has achieved a magnificent success. In the year of 2011, the agriculture and industrial gross output of Jiuguan Town is 118.2 billion RMB, in which industrial gross output is 117 billion RMB, government fiscal revenue 1.4 billion RMB, peasant per capita income 15 thousand RMB.

In particular, the wood industry develops rapidly. There are more than 160 solid wood flooring enterprises, wood flooring production has reached more than 25 million square meters, output value over 3 billion, paid taxes 40 million RMB. In addition to domestic sales, the wood flooring from Jiuguan are exported to Europe and the United States market. At home and abroad, Jiuguan wood flooring has formed a certain degree of reputation.

On the 2016 Jiuguan Town People’s Congress, representative personages of various circles in Jiuguan has discussed its overall Objective for next five years: fully implement the “innovation, coordination, green, open, sharing” five development ideas, further strengthen sense of law, Internet thinking,



ecological thinking, focusing on “wetland, historical village, industrial city ”urban and rural characteristics, in accordance with the working principle of "Prosperity in Industry, rich and happiness in life, ecological in environment " to make Jiuguan Town a characteristic town with “Wood Art quality, water town charm”, a new industrial city in the eastern of Huzhou, to make a small town more powerful. (Yao)

But Jiuguan Town’s economic development are facing some challenge recently. On the one hand, Jiuguan needs to meet the economic growth goal to catch up with the rapid development speed and on the other hand Jiuguan need a economic transformation to keep its economic dynamic and sustainable. As far as we know from the survey and research, Jiuguan town’s income mainly relay on the first and second industry. The industry category are narrow which only focus on the agriculture and wood manufacture. Although the wood material isn’t from local woods or are from manufacture planned woods, the local environment are polluted due to the production. In the meanwhile, some nature resource are wasted or ruined by the agriculture or fishery industry. It is not good for the long term development for the area.



A wood floor manufacture workshop near the farm land  
*Took by Author*



### 1.3.2 Social Aspect

During our field trip of the villages, we found that the villages are one of those “Hollow villages”.

“Hollow village” phenomenon indicates the fact that village population decreasing and buildings are left unused. The traditional way of agriculture production in China’s village can only bring very less profits which lead the “hollow village” phenomenon become more and more serious. Due to the big economic development difference between rural and urban, especially on income, a big amount of labor force move to the bigger city from villages for working or doing business, than the house in the village become empty without people living in and no enough people take care of the farm land. Main reasons for this are the traditional agriculture requires big investment, the long producing cycle, the retribution is slow, risk is high due to nature reason, and comparative benefit is low. Comparing to agriculture, people with some technique like woodworking, lacquerer and cementer can find a job in city with daily wage 150-300 rmb. So most of the young people are not willing to stay in village to work on agriculture but go out the find jobs in big cities. When they earn enough money, they will buy apartments in city and move the whole family into the cities. The villages have become the a temporary place where people live in during Spring Festival. Due to the lack of young labor force in villages, only old people and children are left in villages. Many house are left unused, land are wasted, than lead to the waste of land resource.



Ganglang, a place where only elder people left  
*Photo Took by Author*

### 1.3.3 Environment Aspect

Another strong impression of Ganglang is the poor condition on public infrastructure in the villages and environment pollution.

The unevenness resource allocation lead to the unbalanced development between cities and villages. After the establishing of P.R.C, Chinese government implemented the policy of develop heavy industry first, agriculture supported industry, villages support villages and urban-rural elements allocation was partial to the cities and industry, which seriously restricted the economic, social and other development of villages. Villages contributed a lot of monetary capital to support city construction which lead to the lag of villages' infrastructure, for example the roads, water, power grid, internet and so on. The infrastructure construction standard is obviously lower than cities. Especially after using different household registration system between city and rural after a long period, dividing citizen into agriculture residence and non-agriculture residence, city citizens and village citizens own big difference on the right of employment, education, healthcare and using public infrastructure.

Due to the wood floor production, large groups of wood field close to the river and adjacent to the ancient village buildings, not only caused the water, noise and air pollution on the surrounding, the large volume and plant category construction form and natural village style is completely inconsistent.

The flow velocity of the river in the village is gentle, the water quality is turbid and the pollution is serious



Dirty and unmatchable Garbage Can  
*Photo Took by Author*



Disorganized wood material storage space  
*Photo Took by Author*



Fish pond water is damaged by resettlement area, the green algae blooms.  
*Photo Took by Author*



The inner river water tunnel is dirty  
*Photo Took by Author*



## **2.China's New Urbanization**

With the rapid development of Chinese urbanization since 1980s, the major cities gained a lot attention and resource, which lead to the inequality of resource allocation of the smaller towns or villages. Ganglang's problem is an epitome of China's Urbanization problem, it behalf the situation of millions small towns and villages in China. In order to solve those problem caused by the China's Urbanization, the action to start the china's new urbanization is essential and therefore the Characteristic Town movement appears, in my opinion, can be the the solution for the problem that caused by the China's Urbanization development.

## 2.1 The Problem of Traditional Urbanization in China

As many other active countries in the world, China took its own path on urbanization 40 years ago. Since the reform and opening-up in 1978, China has experienced a rapid and unprecedented process of urbanization and created the largest flow of rural-urban migration in the world history.

On the one hand, the China's urbanization outcome is significant: China's urbanization has steady entered the stage of acceleration, experiencing a high speed development since 1978. China takes only 30 years to achieve the medium stage of urbanization and expected to go into the mature stage 25 years later (Chuanglin, 2009); Secondly, China's urbanization has went through several times of adjustment on the development path which will lead China's urbanization into a healthy direction; thirdly, the theoretical study on China's urbanization has developed and improved more than 40 years and now merging of relevant research institutions, to step into a mature stage.

On the other hand, China's rapid urbanization does cause many urgent problems and some obvious performance can easily indicate this. For example, China sacrificed the environment for the economy growth, the air pollution now become an ugly label for China; the big polarization between rural and urban, imbalance between village and urban and so on. "Since 1949, China's urbanization is always being unhealthy." (Yuan & Wei, 2008) summaries the problem into the flowering aspect: 1. the urbanization and industrialization is unmatchable; 2.the urbanization of land is more than the urbanization of population;3."Uncompleted urbanization" will cause the waste of land and adverse to the scale operation for the agriculture (Liu, 2012); 4."City Disease" and "Village Disease". The former one indicate the fragility of urban economy system (exceedingly reply on the foreign trade, insufficient domestic demand, lack of impetus of economic transition), society fragility and reduction of "security". (Yuan & Wei, 2008) The later one indicates the "Left Behind" problem. Since 2006, the media in China reported that there are 470 million women, 230 million children and 180 million aged people left behind in the village and this population is still growing.....This large amount of population is austere problem and barely seen in the human history. (Ma, 2008);5.the negative effect of urbanization, including: the high cost of urbanization has a bad influence for peasant to improve their life quality; the population mobility caused by urbanization will affect the rural labor force to improve their quality; urbanization cause the loss of a large amount product factors; the weaken of agriculture and enlarge of difference between rural and urban (Qin, 2005); the expansion of city encroach the cultivated land resource; urbanization will lead to the environment pollution in the village than cause the village out of order and strike to the traditional culture...(Wang, 2009)

Moreover, the problem of Chinese traditional urbanization contain five "strategic" drawback: 1.urbanization largely fall back compare with the industrialization; 2.it is very obvious that the urbanization of land is faster than the urbanization of population in the process of city urbanization; 3.the urbanization urgent need to solve the problem of unfair treatment between "cities and rural area, registered population and resident population"; 4.the urbanization emphasis the development quantity and scale but ignore the cost of resource and environment, showing the anti-sustainability of extensive production; 5.the urbanization urgent need to solve the immature of operate modern management systematize and eliminate "city disease". (Niu, 2012)

Obviously, China's urbanization now is facing a very austere challenge. How to balance the development between rural and urban, how to increase the rate of urbanization in China without putting more pressures in cities... To solve the problem mentioned above, China need to find a new way of urbanization and we called in New Urbanization.



Shenzhen Nowadays  
www.baidu.com



## 2.2 Definition of China's New Urbanization

The New Urbanization idea in China has been brought up for more than 10 years. The most recognized saying is it was mentioned on the Sixteenth CPC National Congress along with the strategy of "New Industrialization", mainly indicated using industry amalgamation to drive the urban-rural integration and the idea was well known by public in 2012, on the economic meeting. "To blend the idea of ecological civilization into the new urbanization process and step on the path of intensive, smart, green and low-carbon urbanization" is first brought up on that meeting and raise the attention of all field and educational circles.

Till now, there still isn't a verified definition for the New Urbanization in all fields. The definition is be given by professional as: the new urbanization's content is democratic, sustainable development and life quality, and set equal, happiness, transformation, green, health and intensive as the main goals, try to achieve a new urbanization process which coordinate the whole area, update and transform the industrial in a low-carbon way, realize ecological civilization, intensive and efficient, to reform regime and create new system. (Shan & Huang, 2013)

New urbanization differ with the traditional urbanization in following aspect: it will pay more attention in villages' development, decrease the urban-rural gap and try focus on the harmonious development of cities and villages; it will not scarifies agriculture and village environment, and develop high quality and efficient agricultural industry according to the local advantage; it will coordinate the development of first, second and third industry, peasant can adjust their job in nearby area; it will change the identity of peasant which means peasant will enjoy the same living condition and public service with residence in cities.

The requirement of new urbanization is to continuously improve the quality connotation of urbanization. Compared with the traditional method, the new urbanization emphasizes the overall inner quality of the whole.

Promotion, which is to promote the emphasis of urbanization from quantity, scale to improving the quality and connotation. For a long time, we used to use the land and energy in the extensive way. Proposed new urbanization must be clear on thought that saving resource and treat environment friendly is very importance; in the past, we rely mainly on promoting with the city center, put forward the new urbanization concept should placed more emphasis on the necessity of the coordination development among city group, big city and small towns.

**"New urbanization road" has such characteristics and requirements:**

(1) the starting point of planning is high. In order to solve the problems of urban construction confusion, small town poor construction, urbanization slower than industrialization, the town planning should be scientifically planned and rationally arranged, so that urban planning should always be in the leading position in urban construction, development and management.

(2) Diversified methods. China has vast territory, complex situation, uneven development, under the requirements of basic principles, the methods to realize China's urbanization should be diversified. The East and the West of China are different, the mountains and plains are different. The different stages of development are different. The different regional characteristics are different..... It cannot be stressed or allowed only one way. The relationship between industrialization and industrialization should be handled in many ways, some synchronous and some advanced.

(3) Good aggregation benefit. One of the biggest characteristics of cities and towns is they has aggregation and scale efficiency. Increase the number of cities, expand the size of the town, and in the meanwhile to reinforce the towns is important. Some city is outwardly strong but inwardly very weak.

(4) Strong influence ability. It is the duty of the town to make use of its own advantages to influence the surrounding areas and the vast rural areas to promote the development of the suburbs and the countryside, which should be done and can be done. The problem is that we should have such awareness, vision, planning and measures. Never be an isolated island town.

(5) Characteristics clear. Cities and towns in China should have their own personalities and its diversity should be highlighted. Cities and towns are living things, all have their own different foundation, background, environment and development conditions, the towns bred therefrom should also show their own distinctive features.

(6) Humanistic atmosphere. We can't serve cities and towns. The purpose of developing towns is to serve people. Therefore, all the cities and towns should be carried out around the people, to establish a strong people-oriented thought, create a good human environment, the formation of a good atmosphere of the people, to produce a good service function for people. On the whole, it is necessary to make cities and towns humane and promote the free and comprehensive development of human beings, not the other way round.

Therefore, we must "strive to eliminate the not conducive urbanization system and policy barriers to the development "(Sixteenth National Congress report ), which is different from the western developed countries and regions, but also different from the traditional town development.It is the "new urbanization" road echoing coordinated development of urban and rural areas and common prosperity of urban and rural areas and new industrialization.

## 2.3 The significance of China's New Urbanization for Villages Development

The appear of the New Urbanization concept is under the background that the traditional urbanization process has severely effect the development of villages. The industrialization and urbanization based on cheap labour and land in villages cause the marginalization of villages. The immigration of 2 billions peasant in the nation have cased some serious society issues which leads to the failure of traditional society management mode. Villages hollow phenomenon has made any villages development difficult.

In the process of China's urbanization, smaller scale cities' resource(nature resource, population, employment, public facility and so on) always be plundered by bigger scale cities. In the end, villages become the poorest victim.

Compare with the traditional urbanization, new urbanization will focus more on people rather than material. New urbanization will drive the modernization, ecological development in the big cities, and urbanization in smaller towns or villages, and try to make the population moving towards smaller towns or villages. New urbanization will equitably distribute and moving the good resource among smaller towns and villages. By all means new urbanization will realize the transformation on industrial structure, employment structure, space structure and grassroots management, and to drive the harmonious development between urban and rural. It will not be another immigration, but a reform that consider the needs of people, through the improvement of institution and infrastructure to make people stay in villages or come back to villages and make village more comfortable for people.

Rural urbanization is an important form of new urbanization, and is an important part of the new urbanization process with Chinese characteristics.

The significance of new urbanization is that it can prevent and cure "city disease", and solve the problems of rural areas caused by traditional urbanization and the problem of "semi urbanization" and so on. First of all, rural urbanization can prevent and control "city disease". With the rapid expansion of the expansion of the city and the city population, a lot of "urban diseases" problem, population expansion, traffic congestion, city poverty, high prices, employment difficulties, environmental pollution, resource shortage of energy and other economic and social problems increasingly bound city development. The essence of "city diseases" is the speed of city development and expansion is more than city resources and environment can bear, the new urbanization makes a large number of agricultural population transfer back to the countryside, on the one hand to reduce the stress of the city on population, transportation, housing, employment, environment, resources and other burdens, effective prevention and mitigation of city diseases; on the other hand,

promote advanced agricultural technology, conducive to the development of agricultural modernization and ensure food security.

Secondly, the new urbanization can solve the rural problems brought by traditional urbanization. In the traditional urbanization, after the transfer of agricultural population to the city employment, the rural left only the elderly children, this situation has brought a lot of economic and social problems in rural areas. First, the traditional urbanization lead to the rural left behind women, left behind children, empty nesters elders and other social problems; secondly, it is difficult to promote agricultural technology, agricultural labor productivity is not high, it is economic problems; thirdly is the responsibility of migrant workers barren fields and homestead waste housing and other waste of resources. New urbanization encouraged farmers to leave their agriculture land but not their hometown, not only to achieve local non-agricultural employment, but also can retain the sense of "home town". According to the actual situation of local areas, new urbanization actively guides farmers to gather in a certain range through land transfer, social security and other means, which is conducive to the realization of moderate scale operation, and also can solve the economic and social problems.



A Typical Household in Chinese Village  
www.baidu.com

Finally, the new urbanization can solve the problem of "semi urbanization" of the agricultural transfer population. "Semi urbanization" refers to the agriculture transfer population, that although they transfer the space and occupation, but they are not fully integrated into the city, their lifestyle, behavior habits, values incompatible with modern society. In a sense, the urbanized life style, the city civilization and the city consciousness are the most essential and core things of the urbanization. New urbanization can make farmers realize non-agricultural employment and citizenization in the local, realize non-agricultural employment, their values and cultural identity is easier to reach a consensus. In the common basis, it is much easier to cultivate farmers to have the city life style and modern ideas, so as to realize the "complete urbanization".



## 2.4 China Characteristic Town

China Characteristic Town refers to the small town development plan that carried out by National Development and Reform Commission, Ministry of Finance and the Ministry of housing. The plan indicated that until 2020, foster about 1000 distinctive town with vibrant leisure tourism, trade and logistics, modern manufacturing, science and technology education, traditional culture, and other characteristics, to lead the construction of small towns in the country.



A Characteristic holiday town get on the list of Characteristic town in Beijing  
[www.baidu.com](http://www.baidu.com)

## 2.4.1 The Beginning of Characteristic Town in Zhejiang Province

The idea of Characteristic Town is not create by Zhejiang province at first place. Beijing, Tianjing, Heilongjiang and many other providence tried to build the Characteristic Town years ago, but all of them didn't turn out well.

The first Characteristic Town in Zhejiang, Yuxi Town which also know as the first Cloud Computing Industrial Ecological Town, was brought up in 2014. Considering the Cloud Computing as the core, big date of Cloud Computing and intelligent hardware industrial as its special industry, Yuxi Town become the first published Characteristic Town in Zhejiang Province.

But Yunxi Characteristic Town didn't just came up from no where. Since 2011, the place became the first Cloud Computing Industrial Park, than two years later, Ali Cloud, China soft International and other 30 companies formed the first Cloud Computing Industrial ecological alliance, "Yunxi Town Alliance". Today, the industrial park's built up area is 200 km<sup>2</sup> and has more than 150 companies. In the year 2014, Zhejiang Government announced that Yunxi town is a characteristic town.

Enlightened by the Yunxi characteristic town, Zhejiang government issued the guiding document on planning and construct characteristic town.

In September 2015, Liu He, director of the office of national development and Reform Commission deputy director, while doing an in-depth investigation of Zhejiang characteristics town construction, he said,"the construction of characteristics town in Zhejiang is an good exploration mode under the new economic development situation, in accordance with economic laws, focus on the formation of comparative advantage and supply capacity to meet the market demand, this is the reflect of enterprising spirit .

At the end of December 2015, the general secretary Xi Jinping made important instructions to Zhejiang province "characteristic town" construction:" characteristic town" construction have important significance to the construction of small towns, the economic transformation and upgrading, new urbanization. Zhejiang's idea of focusing on the supply side to cultivate the town economy, also inspired the economic work for the future."

At the beginning of January 2016, Zhejiang governor Li Qiang said after the characteristics town of Shaoxing Ningbo construction investigation: "Zhejiang use their information economy, landscape resources, historical and cultural advantages, accelerate the creation of a number of characteristics town, which not only conforms to the law of economic and social development, but also conducive to the practical problem of caused by economic

structure transformation and power conversion, is a major strategic choice of Zhejiang to adapt to and leading the new normal economy.". Subsequently, the characteristics town planning and construction started all over the country.



Yunxi Town in Hangzhou  
[www.baidu.com](http://www.baidu.com)



## 2.4.2 Definition of Characteristic Town

So what is Characteristic Town exactly? The official definition is that the Characteristic Town is a developing space platform that relatively independent of cities and has clear industry orientation, culture content, tourism and certain community function, different from administrative division unit and industrial park.

The Zhejiang Characteristic Town has certain industry orientation, for instance information economics, environmental protection, health, tourism, fashion, financial, high-end equipment manufacturing and so on, which are the future pillar industry of Zhejiang Province. Also Zhejiang Province pays attention to its historical and classical industries like tea, yellow rice wine, traditional Chinese medicine, celadon, wood carving, root carving, stone carving, the “scholar’s four jewels”(writing brush, ink stick, ink slab and paper). Zhejiang Province insist on the coordinate development between industry, cultural and tourism, and believe that production, living and environment can integrative development.

In the process of construction, characteristic towns should avoid the phenomenon of style convergence in urban construction. The characteristic town needs to show its own characteristics to attract attention. The style of the town is the major way to highlight the characteristics of the characteristic town, and it is also the most intuitive way. At the same time, the characteristic town construction area and planning area are limited, so the unified style features, appearance highlights the characteristics of the town also has the possibility of realization. The characteristic town should have a pleasant style and a livable environment. The ultimate goal of the characteristic town is to form a living area around the characteristic industry, while developing tourism, highlighting local culture and having certain residents. Therefore, as a living area, the town needs to provide a comfortable living environment for the local residents. As a scenic spot, the town also provides an environment that attracts visitors to sightseeing. Compared with the large-scale construction of large cities, the size of the town is generally controlled within 10 square kilometers, the population is controlled at the scale of 3-5 people, and although it is small, but its beautiful specialized. Although the town is relative to the village, its scale is limited, but it has the living and productive conditions corresponding to its scale. As a town, the service quality provided by characteristic towns can not be greatly reduced compared with large and medium-sized cities.



Zhejiang characteristic town  
[www.baidu.com](http://www.baidu.com)

### 2.4.3 Some Feature about Characteristic Town

By principle, each historical and classical industry can only be used by one characteristic town. The government should give categories guides according to each characteristic town. The planning area of the characteristic town should not bigger than 3 km<sup>2</sup> and the building area should be controlled around 1 km<sup>2</sup>. All characteristic town should be build to meet the standard of 3A level scenic region. The characteristic towns which belong to tourism kind should meet the 5A level scenic region standard. It is encouraged that local government to improve their industry cluster district or industrial park's specialty industry with the idea of Characteristic Town.



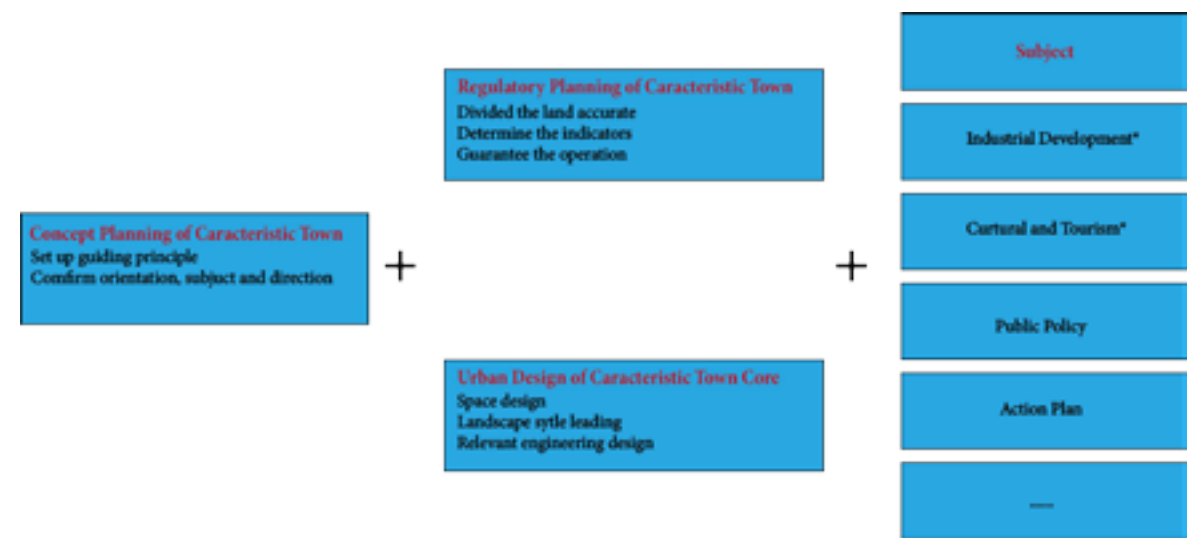
Rage of characteristic town  
Made by Author

Insisting the leading from government, enterprise as the main body and marketization is the operation mode for the characteristic town. Within 3 years, Zhejiang government plan to screen cultivate and build up 100 characteristic towns in Zhejiang Province in batches.

The planning of characteristic town shall follow the “1+2+X” planning system. (see image below)First step is to have a overall concept plan which is the guiding documents for the characteristic town planning. The concept plan should set up the project orientation,

, define the subject and direction of the town planning. The second step is to process more specific planning which contains two parts. One is the detailed masterplan which divided the land accurately, determined indicator and guarantee the plan is realizable. Another is the design of the core part of the characteristic town, including space design, landscape style design, related engineering program design and so on. In addition to the two steps mentioned above, monographic study on one subject is necessary. The subject can be industrial development, culture and tourism, public policy, action plan and so on. Among the subjects, the industrial development, culture and tourism subject study is obligato.

Besides of the industry characteristic, there should be clear characteristic shown on space. There should be a clear and uniform style of building, open space, streets, landscape and the entire environment. The coordinate development between spatial form and environment quality will provide a good investment object.



“1+2+X” planning system  
Made by Author

It is also an area with distinctive policy. The government should make some pertinence policy which is related to the development of the characteristic town, build up a mechanism system that can encourage industry, funding and talent to enter and guarantee the environment pollution curb and revenue sharing in the characteristic town.

## 2.4.4 The Significance of Characteristic Town

The Characteristic Town policy is the key to some problem that occurred on the development path of Zhejiang Province.

It is an efficient method to solve the insufficient supply problem of Zhejiang Province. The industry transformation and upgrading of Zhejiang Province can not keep pace with the speed of consumer market upgrade, which lead to the insufficient supply and consumer demand move towards oversea. It is meet the requirement of industry structure evolution.

Also, it can improve the quality of Zhejiang Industry. High-end industrial factors are not aggregated enough in Zhejiang. The basis of characteristic town are industrial ecology, natural ecology, policy ecology and society ecology.

Characteristic town is the key point to broke the traditional two-spot structure between urban and rural, and improve the living conditional of inhabitant in rural place. It is conform to the new urbanization of China.

Possess distinct characteristic is the core feature of the town, and the industrial characteristic is the most essential part of it, culture is the center of characteristic town. Characteristic town should become a platform that blend industry, town, people and cultural together. Only possess with professionalization industry, the characteristic town can be sustainable, attractive and viable.

Characteristic Town is not a simply town planning or industrial park planning, but a integrity planning that contain many factors. The key point is to have a creative planning concept which can fit with various planning.

Overall, the Characteristic town policy is a reform experiment.

## 2.4.5 The Operation of Characteristic Town

Characteristic town implement “Enterprise as the center” operation mode. Take enterprise as the main body and use marketization to run the town is the operation mode for the characteristic town. The government’s duty is to develop guiding plan, protect the environment, provide good service and no interference the enterprise to run.

The local residents and peasant should be involved into the planning and construction of the characteristic town. We should use their initiative and enthusiasm and guide the other social force to help with the policy, so the market and local inhabitant can become the real main body of the development of the characteristic town.

The way of financing is another creative point of the characteristic town. As it mentioned before, the characteristic town should follow the lead of market, so financing should let social capital get involved, using the methods of industry funds, crowd funding for the stock, PPP and so on. Bring in the third party to provide the enter enterprise professional service like funding, market promotion, technology, supply chain integration etc, to make the characteristic town a new kind of new entrepreneur platform.



## 2.4.5 Experience from other Countries(1)

### British characteristics town planning and design experience

Britain attaches great importance to the comprehensive planning and construction development of small towns and implements Howard's concept of Garden Town construction, pay attention to the protection of landscape resources, and integrate the unique traditional landscape culture into the sustainable planning and construction of small towns. In England, Market Town is encouraged to provide employment opportunities for farmers who leave the land. Each town has 2000 to 20000 people. Their common feature is that industry has become the center of the town, and it has the potential to continue to develop the industry and does not pose a potential threat to the surrounding environment. Another kind of small town called New Town and there are about 20 of them in the suburbs area of London. They are not entirely new towns, but an expanding industrial development center, public transport hub and employment center on the basis of selected old towns, and the government encourages people to move into these new towns.

Case: Epping, Essex, UK

Epping is an ordinary town in Essex. As early as more than half a century ago, it is still a typical rural area. Now, Epping has long been one of the middle class town in Britain and the evolution track of Epping from the countryside to the town is a microcosm of the urbanization of the United Kingdom".



Epping, Essex, UK  
www.Google.com

1. In the process of urbanization, Epping hold full respect for nature, comply with nature, they fit into the modern town life, but don't forget the past, let civilized history last, this is one of the important topics of urbanization. For this reason, Britain has adopted some effective measures, in which legislation is a weapon. According to British media's statistics, since 1909, British issued the first "residential and urban planning regulations" and after that Britain has promulgated more than 40 urbanization and related laws and regulations. They strung up a successful British urbanization construction.

2. Create a development model that encouraged farmers to leave soil land but not their hometown. Relying on the countryside, the rural industry with agricultural as the processing object should be developed. The gradual concentration of rural industrial development has promoted the division of agriculture and industry, it realized the local transformation of farmers and provided the guarantee for the large-scale operation of agriculture. On the one hand, it transformed the countryside into a livable small town, which led to the emergence and growth of the new industrial town, promoted the integration of the city and the countryside, accelerated the process of urbanization in the countryside, on the other hand eased the heavy pressure of the big city.

3. Pay attention to the protection of historical culture and the construction of characteristic towns. The first is to formulate special laws and regulations to protect historical and cultural remains and regional cultural characteristics. The second is the delineation of special protected areas since 1967. The third is to adjust measures with local conditions, strengthen the characteristics. According to the local natural, historical and industrial development characteristics to make differential plans, give full play to the role of urban culture in supporting the construction of urbanization, urban culture and regional culture to highlight the combination.

4. Establish and improve the social security system. The first is to eliminate poverty and narrow the gap between the rich and the poor. The second is to strengthen the construction of public health facilities, efforts to solve the shortage of public health infrastructure. The third is to establish a sound social security system. The social security system in Britain provides citizens with comprehensive social security, including providing basic living security to residents, providing medical services, providing decent living housing, providing educational services and solving immigration education problems.

## 2.4.5 Experience from other Countries(2)

### **The USA characteristics town planning and design experience**

The construction of small towns in the US can not be random and need the preparation of detailed planning, in the meanwhile, the government attaches great attention to infrastructure construction. The small town construction funds shared by the federal government, local governments and developers. The federal government is responsible for investment construction highway. The town and state government are responsible for the construction of water plants, sewage treatment plants, garbage treatment plant. The developer is responsible for the construction funds of the traffic, hydropower, communication and other living facilities in the small town community. The government pays special attention to environmental construction. In the United States, environmental construction is one of the main contents of urban construction, which provides a sustainable social and economic environment for small towns. In planning, the government attaches importance to town characteristics and pursues individuality. Wherever you go, you can see small towns with different features. After the completion of small town construction, the government still attaches importance to management, the so-called “30% construction, 70% management.” City construction management experience in the United States two main points: the first is to have perfect rules and regulations; the second is in accordance with the law, violators have to be prosecuted.

Case:Greenwich, Fairfield, the United States

Greenwich in the USA, is a town in southwestern Connecticut on the Strait of Long Island, about 40 kilometers from New York, with a population of about 59 thousand. The area is only 174 square kilometers, but located more than 380 Hedge Fund headquarters, managing assets is more than 150 billion dollars. Greenwich also known as “hedge funds Base camp”.



Greenwich, Fairfield, the United States  
www.Google.com



## 2.4.5 Experience from other Countries(3)

### **The West European Countries characteristics town planning and design experience**

In the process of urbanization development in Western Europe, the population, land, capital and other economic elements related to urbanization can be freely flowing and configured. The market mechanism plays a leading role. At the same time, governments take necessary intervention for market competition and social security, improve the legal system, formulate and implement of national urbanization strategy and public policy, develop regional infrastructure construction, improve the city environment, provide public services and guide the development of urbanization and industrialization of the market. Actively promote regional structure adjustment and response to rapid urbanization development. In this process, through the continuous improvement of the system mechanism, the government adjust policy according to specific problems in different time period. Use the administration, finance, planning and other means to make up for the lack of market mechanism.

Case: Portofino, Italy

Portofino is a famous tourist harbor town in Northwest Italy. In Italian, Portofino is intention means a border port. This small Italian town is a tourist resort with fame spreading far and wide.

In 1920s, Portofino developed rapidly. Many European aristocrats love the climate and the environment here. They built a stately village, settled in, made Portofino famous in the world. After that, more and more celebrities came here, including famous artists, financiers and politicians around the world. The town layout vertically like a ladder along the mountains, horizontally zonal distribute along coastline, building were built up face the sea, to ensure that every building has a window overlooking the sea. The third to the fifth floor buildings contain a tower, forming a high and low silhouette. All buildings decorated with exterior red, yellow or pink color, extraordinarily beautiful reflected in the azure sea.

In business aspect, the town makes full use of sea resources. Coffee shops put the table near the blue sea water. The tables and chairs, decorations and other details create commercial places with a sense of artistic. In terms of space, the rich public space is the source of the leisurely life atmosphere of the town. The three or four meter wide street is friendly and the winding form is suitable for walking. Around the tower, a half paved shingle paved on the marina square.



Portofino, Italy  
www.Google.com



## 2.4.5 Experience from other Countries(4)

### *What should we learn for the Chinese Situation*

**First of all, the developed industrial economy is an important foundation for the development of small cities and towns.** On the one hand, the developed industrial economy can provide sufficient jobs; on the other hand, it provides material guarantee for the development of urbanization. The small towns in the Yangtze River Delta mainly rely on the rise of private economy and the development of these areas has a strong regional economic base.

**Secondly, the diversification is the inevitable trend of the development of small towns.** The practical experience of small town development around the world shows that different regions have different development bases, conditions and stage characteristics, and they all have different development path. Even in the same region, the diversification of the interests of the main body, the main investment will also promote small towns with a variety of development paths.

**Thirdly, the good policy mechanism is the guarantee for the healthy development of small towns.** On the one hand, mechanism innovation has become one of the driving forces for the development of small cities and towns; on the other hand, the government can make up for the deficiency of market mechanism through policy intervention. The foreign experience is generally the latter method and the domestic is more like the former. With the deeper influence of the market economy on the development of small towns, the policy mechanism should be more manifested in the intervention of the market, in order to protect the public interest.

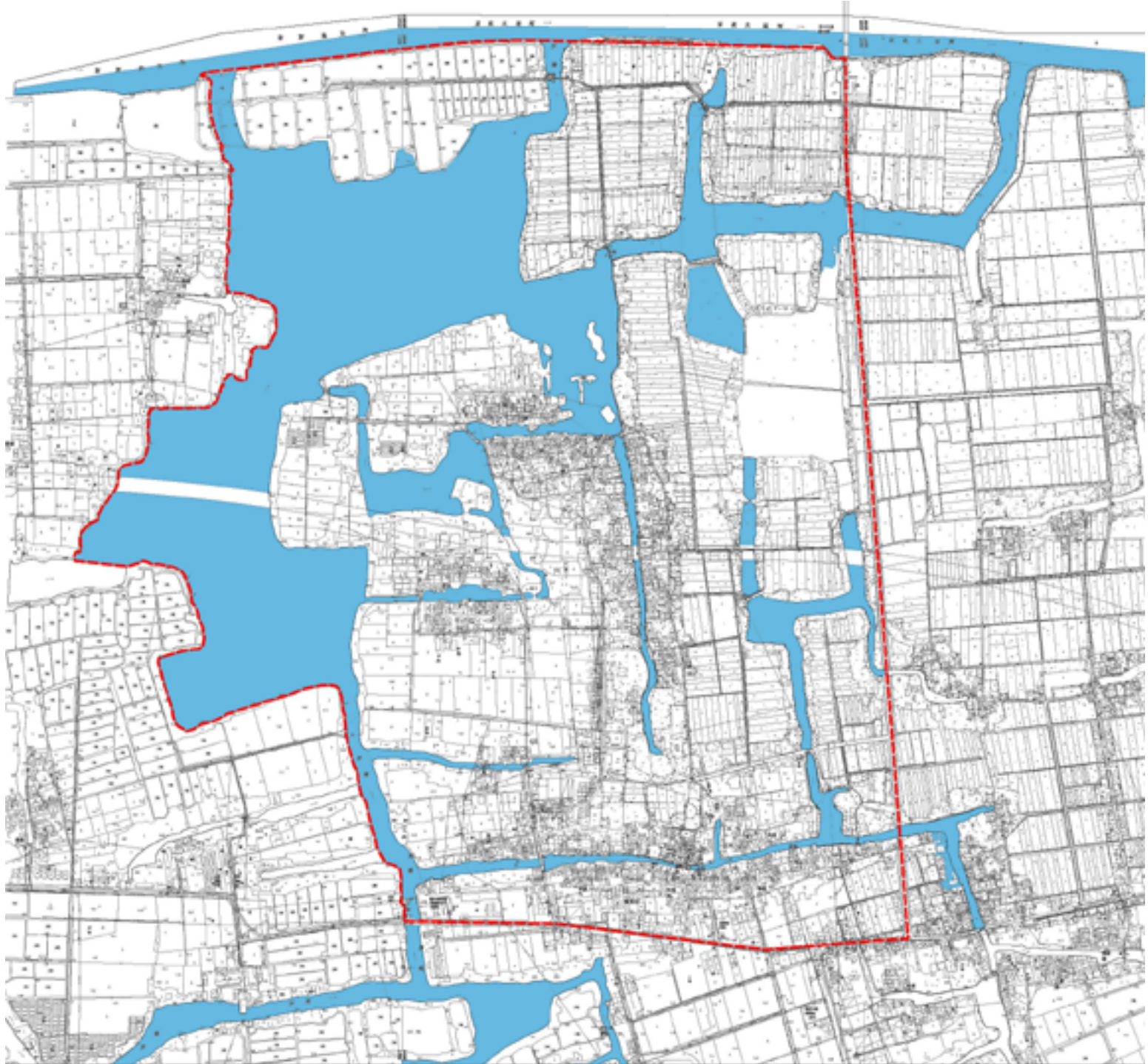
**Fourth, deal with the short and long term relationship according to the stage characteristics of the development of small towns.** China is still in the stage of rapid development of urbanization, even within the metropolitan area, there is the problem of unbalanced development stage, the current small towns should develop strategies according to the respective characteristics of the stage, but also need to consider the long-term interests, focus on sustainable development of economic, social and ecological environment.

## **3.Per-Stage Survey and Analysis of Ganglang**

## **3.1 Wet land Analysis**



# Current River and lake distribution

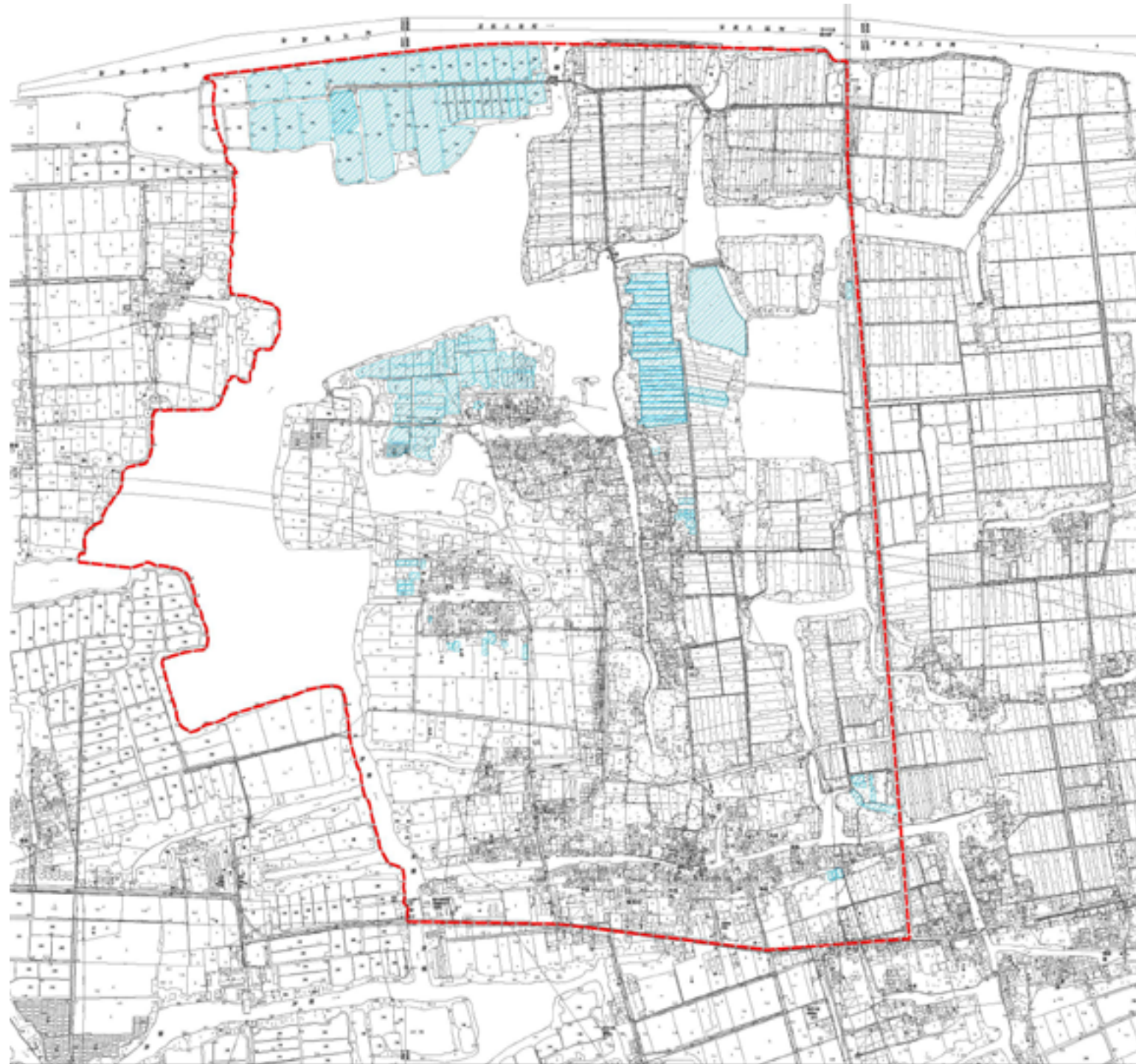


The status quo is mainly composed of lake, river, pond and fish pond, the water system is divided into inner and outer embankment, river and pond fish ponds are controlled by the levee sluice, the direction of water flow into Tai Lake from south to north, from west to East into the Taipu River.

It can be read from the map that the inner river connection is not continuous.

Current River and lake distribution  
Made by Author

## Current Pond and Fish Pond Distribution



There are three big lakes, located in the north of the site, Yi Jia Yang Lake and the inner lake in the central area, connect with the Grand Canal from Beijing to Hangzhou. The two lakes on the west are planning for flood control and navigation channel. In the site, there are four river way are active water way, others due to the construction and rebuilt of some area now become beheaded river.

The most of the pond are located in the north of the site, and mainly function as fish pond.

Current Pond and fish pond distribution  
Made by Author



## Ecological Landscape System

The modern ecological infrastructure theory consider all the things that can provide ecosystem services, like large scale landscape pattern, green space system, wetland and water systems, agro forestry systems and nature conservation and open space system, are included for ecological landscape system.

In the project site, there exists four hills, combine with the water surface to form a scene of “faraway hills and nearby water”.

The natural landscape in this project can be classified into two kinds: water body landscape and biology landscape.

Water body landscape is the main landscape in the project. The scenes come from the water and change with the water. The water landscape resource mainly includes fish pond, river ways, lakes, natural and man-made pond, focus on the lakes and river ways. The total area of the water is about 876866sq.m. The water quality is high, water environment is good.

In the project area, the hydrologic conditions and climate environment provides a suitable biotic environment for animals and plants in the site.

The combination of high quality water body and livable biotic environment guarantee a good ecological landscape system in the project site.



Location of different Landscape  
Made by Author



# Wetland Landscape (1)



1.Fish Pond  
Photo took by Author



2.River Way  
Photo took by Author



3.Lake With Large Water Surface  
Photo took by Author



4.Agriculture land  
Photo took by Author



5.Fish Pond  
Photo took by Author



6.Pond  
Photo took by Author



7.Agriculture land  
Photo took by Author



8.Wetland  
Photo took by Author



9.Wetland  
Photo took by Author



10.Agriculture land  
Photo took by Author



11.River Way  
Photo took by Author



12.River Way  
Photo took by Author



Wetland Landscape (2)



13.Wetland  
Photo took by Author



14.River Way  
Photo took by Author



15.Wetland  
Photo took by Author



16.Riverbank  
Photo took by Author



17.The River is be Blocked  
Photo took by Author



18.Wetland  
Photo took by Author



19. Riverbank Design  
Photo took by Author



20.Riverway  
Photo took by Author



21.Riverway  
Photo took by Author

## **3.2 Historical Heritage Analysis**



# Tangibel Culture Heritage— Architecture

In the south of the project site, many valuable historical buildings have been preserved. They are the cultural objects that need to be protected in this project.



Legend

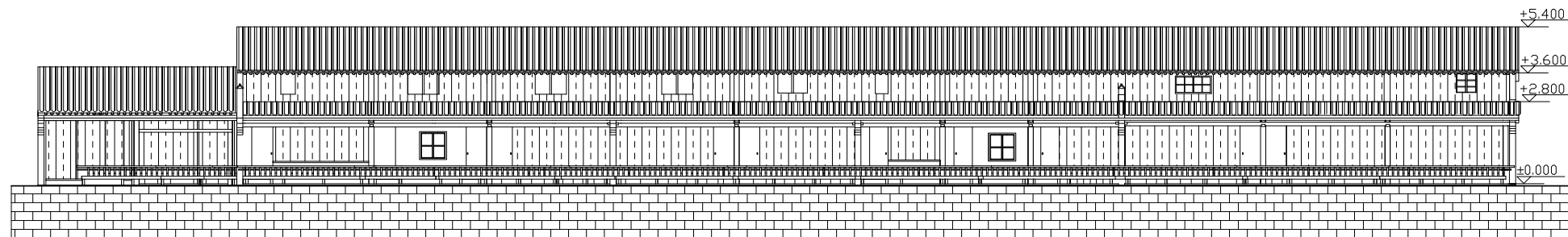
Historical Building

5 meters control range line. Within the range, no new buildings can be built and the old buildings need repair and maintenance. In any case, avoid damage to the protection buildings.

10 meters control range line, within the range, new buildings style should coordinate with protection buildings and the building height shall not be higher than the protection buildings.

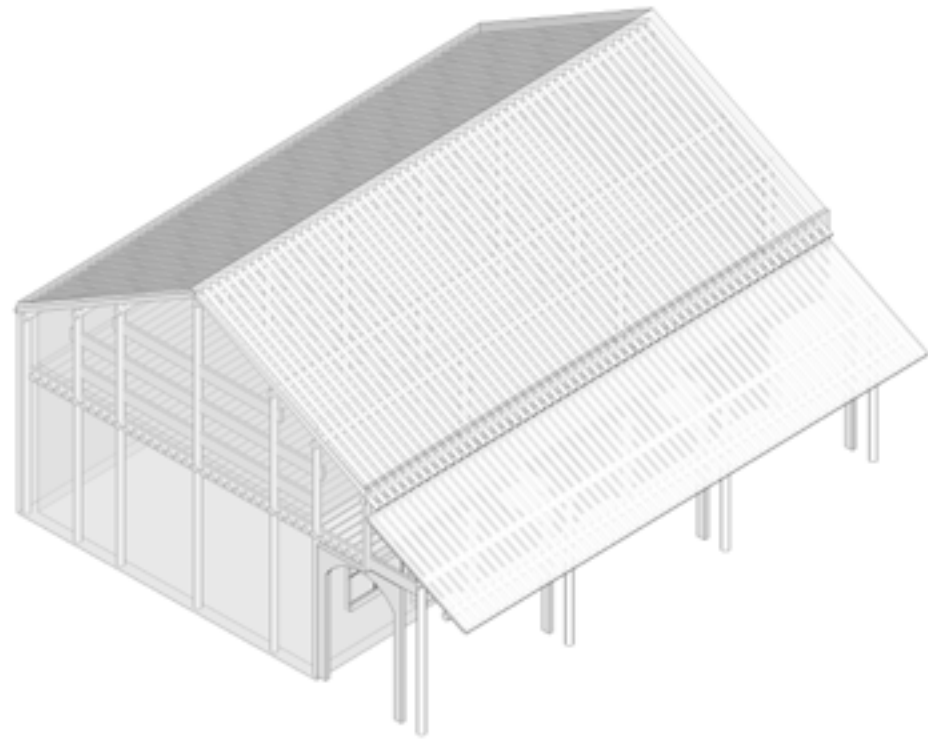


Some Part Section View of the Historical Building  
Photo took by Author

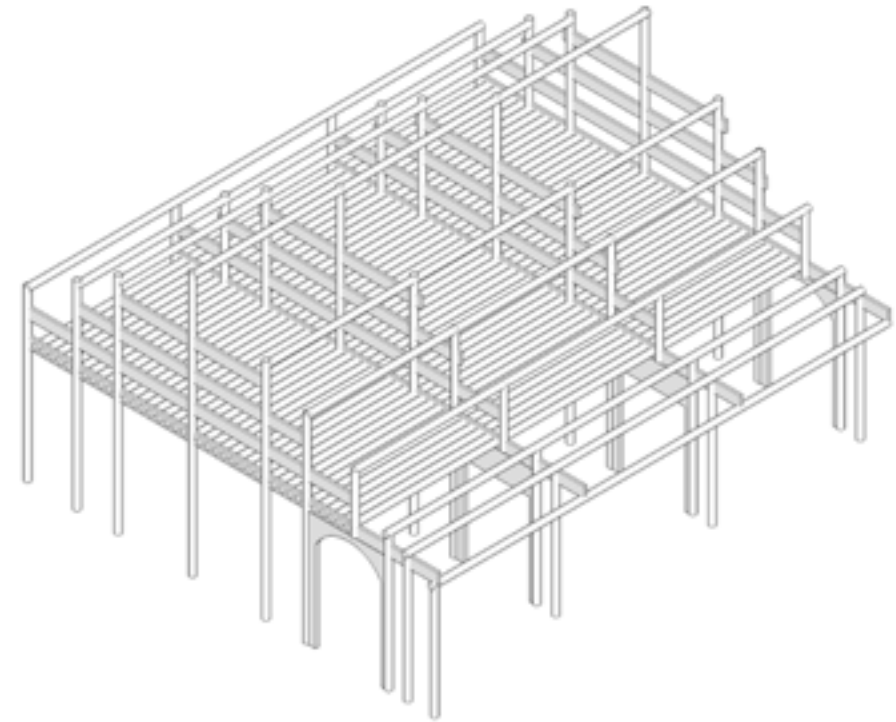


Cad Darwing of the Historical Building  
Photo took by Author

## Tangibel Culture Heritage— Architecture Structure



Integral Axonometric Drawing  
Made by Author

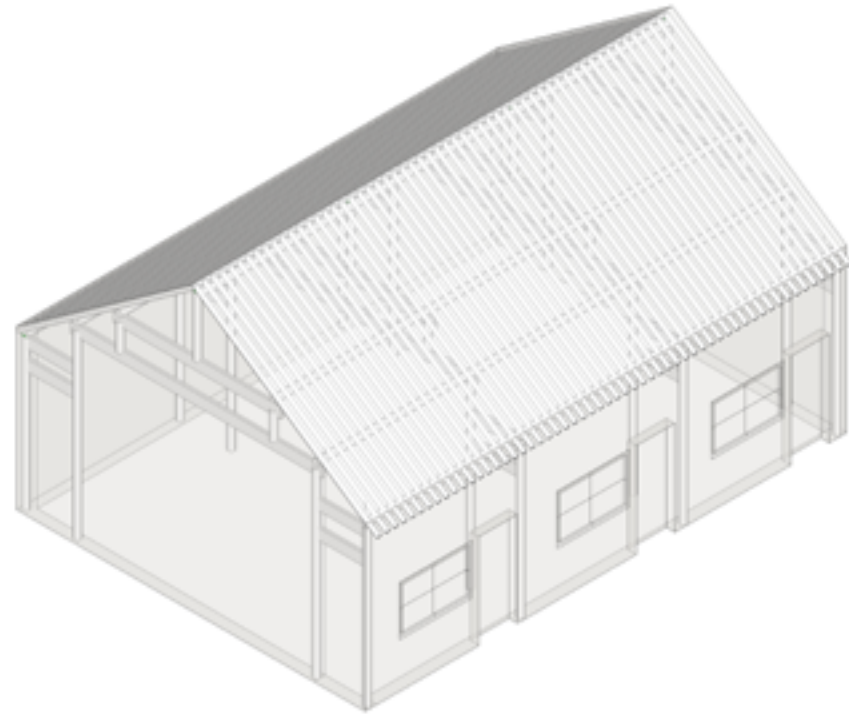


Frame Axonometric Drawing  
Made by Author

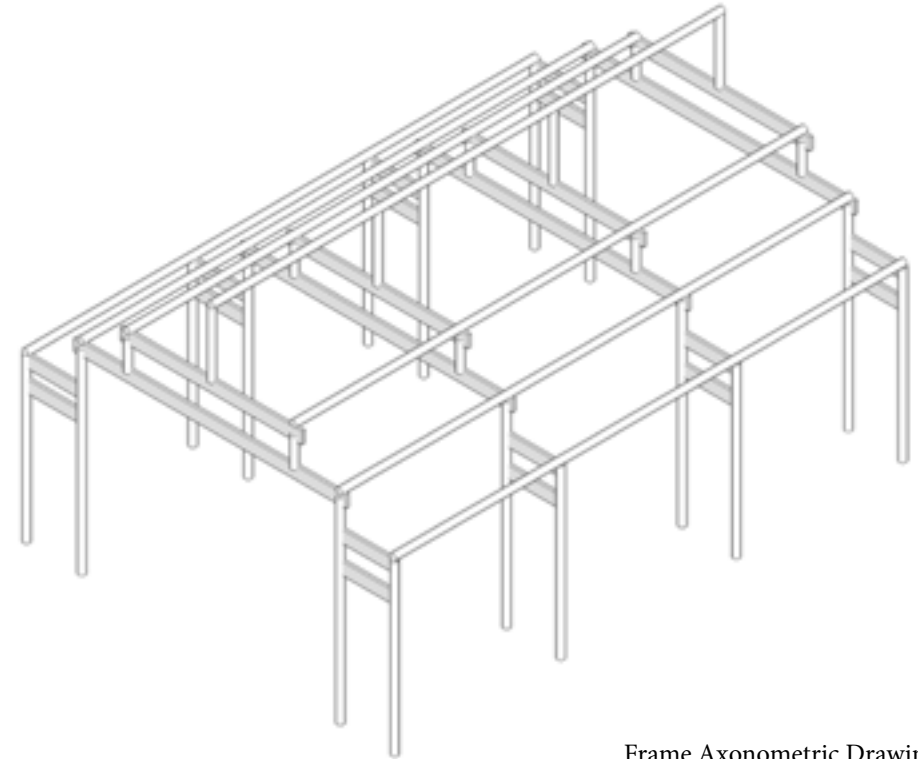
Type one: Column and tie construction type, also called Chuan-dou type

The form of the architecture is the wooden structure typical in the water town area at south of the Yangtze River and the structure Chuan-dou type. The wall is made by bricks but empty inside. The outer surface is plastering with white lime water and some part of the wall is covered by wooden door. Doors and windows are mainly wooden doors and windows. The roof is a double slope roof, the material for it is the gray tiles. The group inside of the building is rammed earth floor. The second floor of the building is a combination of wooden railings and wooden board.

## Tangibel Culture Heritage— Architecture Structure



Integral Axonometric Drawing  
Made by Author



Frame Axonometric Drawing  
Made by Author

Type two: Post-and-lintel construction type, also called Tailiang Type

The form of the architecture is the wooden structure typical in the water town area at south of the Yangtze River and the structure Tailiang Type. The wall is made by bricks but empty inside. The outer surface is plastering with white lime water and some part of the wall is covered by wooden door. Doors and windows are mainly wooden doors and windows. The roof is a double slope roof, the material for it is the gray tiles. The group inside of the building is rammed earth floor. The second floor of the building is a combination of wooden railings and wooden board.



## Tangibel Culture Heritage— Architecture Floor Plan and Detial Analysis

Here, use one group of buildings, Tang family Group, as an example indicated a deep anaylysis of the historical building of Ganglang

Tang family house was built in the late Ming and early Qing Dynasty, and the buildings are 1-2 story residential building. The housing structure is Chuandou type, double roof slope. The foundation of the house is stone foundation, the wall is empty bucket wall, and the outer wall surface is plaster with white lime water. Building group covers an area about 756 square meters, the construction pattern is relatively complete, still is use by residents. The building plane is symmetrical. The building structure is well preserved. It is suggested that the conservation measures should be as follows: keep the original wooden structure and roof form, reinforce and repair the corridor, doors and windows to restore the original history look. Historical materials should be used as far as possible.



Roof Structure  
Photo took by Author



Support construction of beam  
Photo took by Author

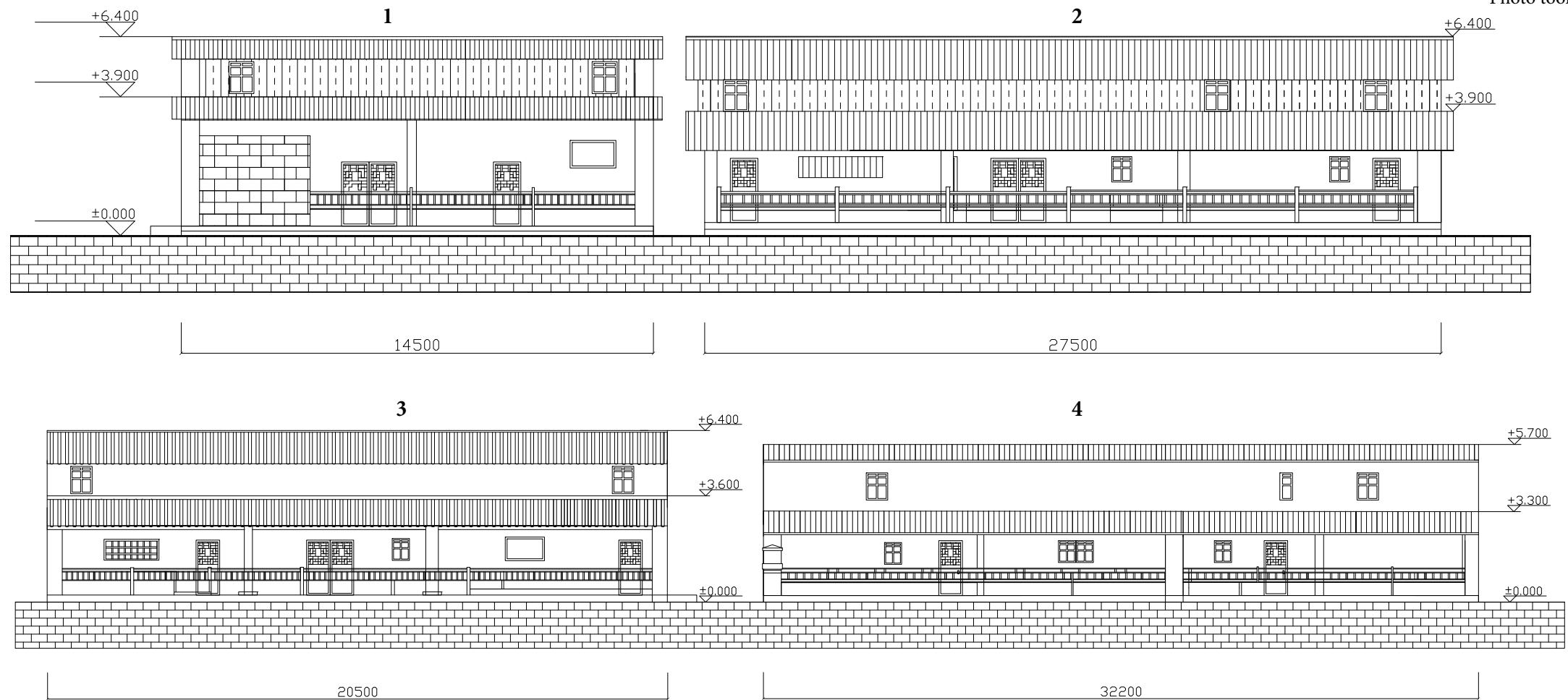


Corridor  
Photo took by Author

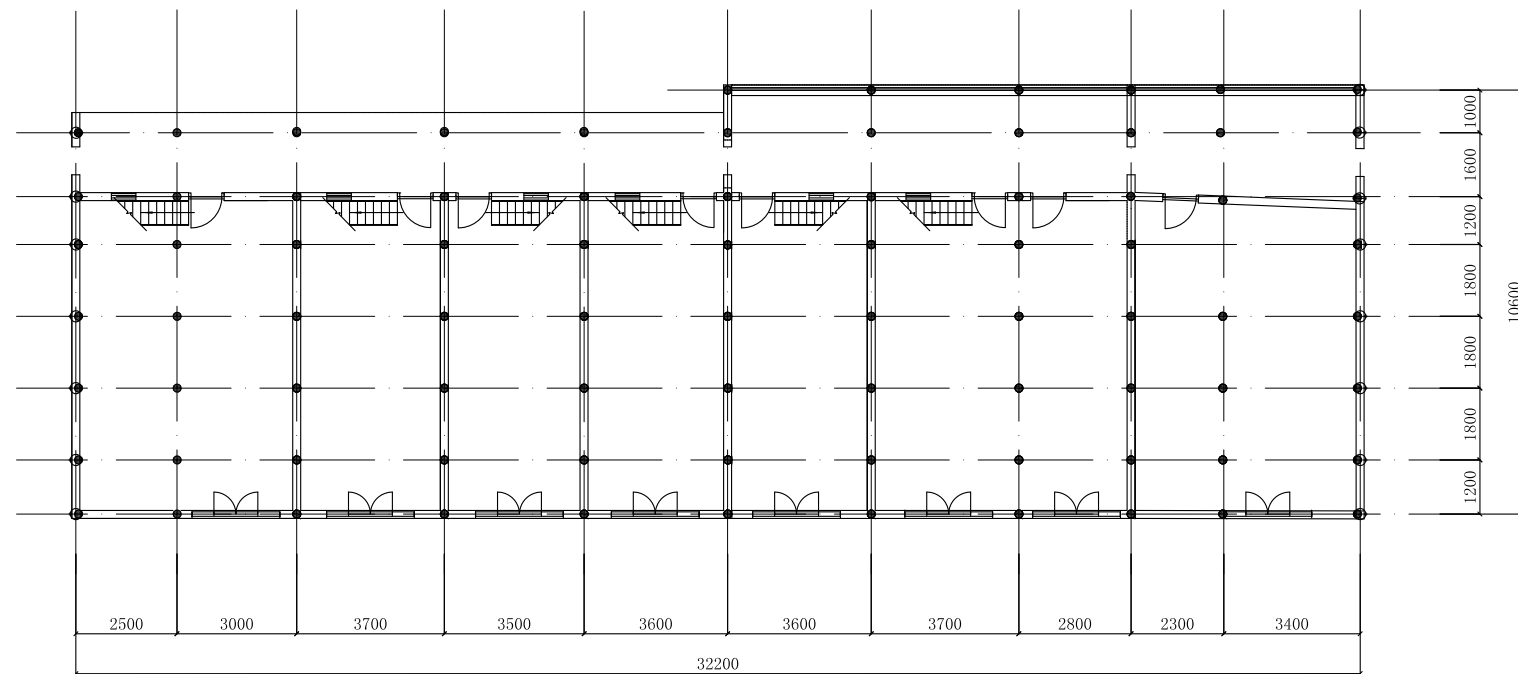
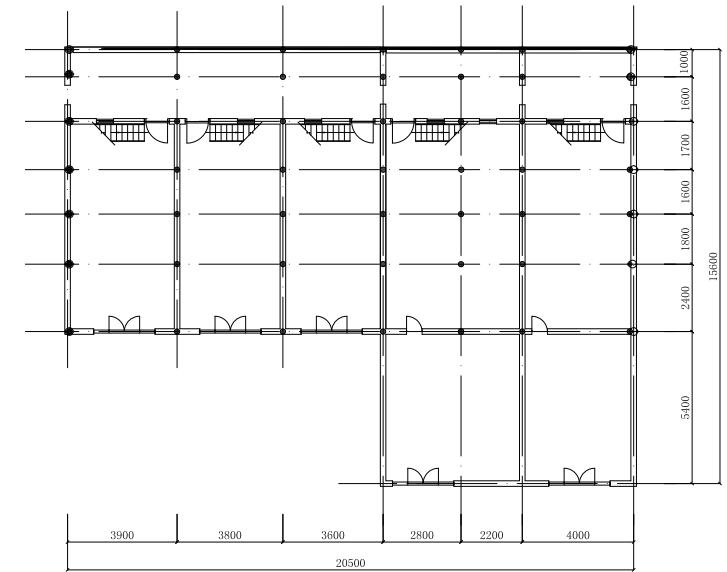
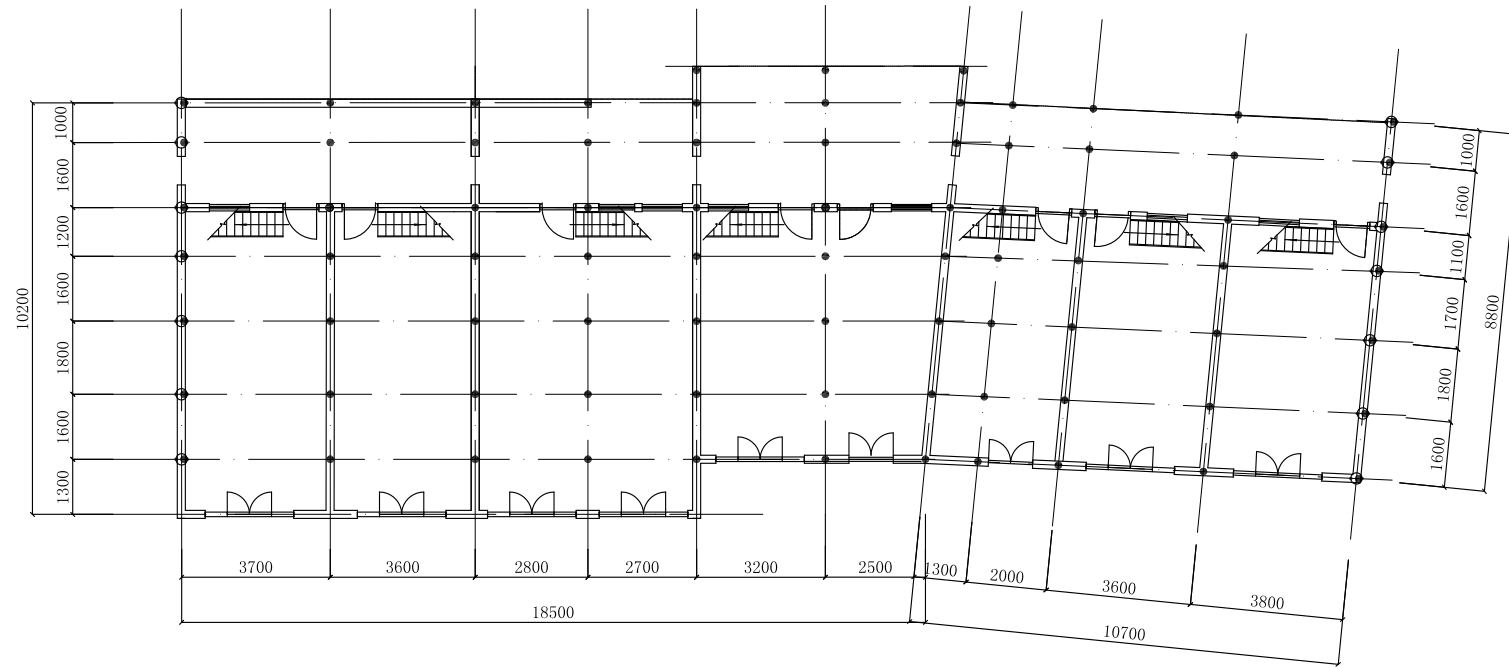




Pictures of Tang Family House  
Photo took by Author



Elevation of Tang Family House  
Made by Author



Floor Plan of Tang Family House  
Made by Author



# Tangibel Culture Heritage— Bridge

Many of the bridges were built in Ming Dynasty during the period of Zhu Yuanzhang, although the hundreds years has been past, they still maintains the original and ancient atmosphere, which also reflects the prosperity of the region in economy at that time. Present situation of bridges is like this: the bridge is made by granite, stone railing. The repair strategy is to retain the original look and consolidate the bridge body.



Xinglong Bridge



North Ren Dai Bridge



Wan Nian Bridge



Gao Sheng Bridge



Yue Xiu Bridge



An Qin Bridge



Xia Jia Bridge

Location and Images of Historical Bridges  
Made by Author



## Intangible Culture Heritage—Wheat-Straw Drawing

The local culture heritage is a drawing made by wheat-straw. This handmade art work came from folk but very rare and precious. This art started in Sui Dynasty (581-618) and same with Kirigami it belongs to Clip art. The straw need to go through the process of "smoked, steamed, bleaching, scraping, pushing, ironing, cutting, carving, weaving, painting" and others, in accordance with its own luster, grain straw color and texture, the straw generally not coloring, need to be cut and paste into. Straw painting has the advantages of gloss transparent, decorative effect, strong artistic appeal, will make the figures, flowers, birds and animal vivid.



Local Artist are Makeing Wheat-Straw Drawing  
Photo took by Author



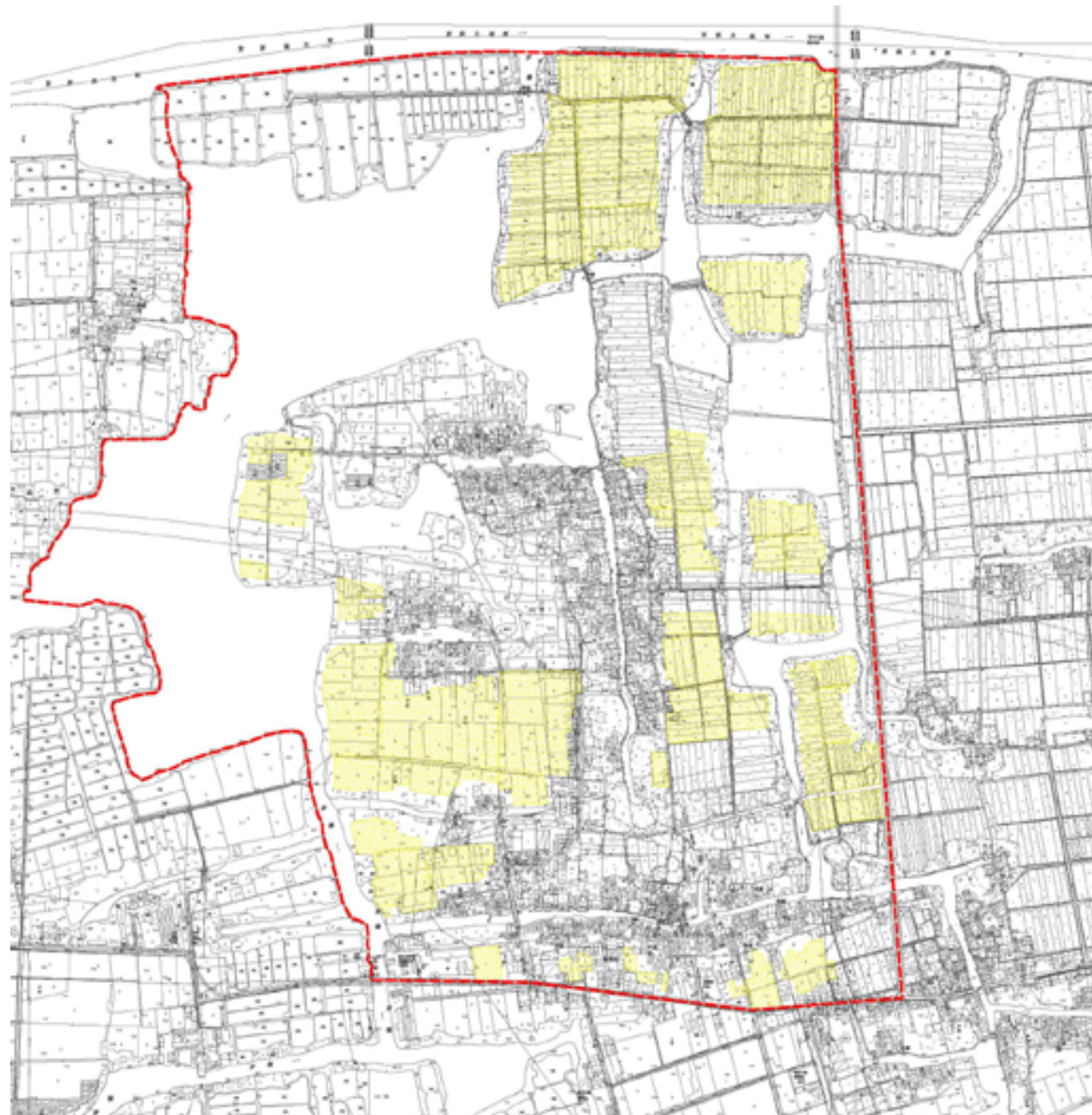
Wheat-Straw Drawing  
www.baidu.com

### **3.3 Other Related Analysis**



### 3.3.1 Analysis of green plants(1)

This map shows the distribution of the current farmland, mostly of the land is basic farmland, and the surface layout is square shape, relatively neat. The landscape effect is good.



Farmland Distribution  
Made By Author

### 3.3.1 Analysis of green plants(2)

This map shows the distribution of the mulberry forest, And most of them layout along the farmland. They are cash crops and in grow forest group.



Mulberry Forest Distribution  
Made By Author



### 3.3.1 Analysis of green plants(3)

This map shows the distribution of the other kinds of cash plants, for example redwood, rape flower. They layout along the river way and around the pond.



Other Kinds of Plant Distribution  
Made By Author



### 3.3.1 Analysis of green plants(4)

#### Location of Big Trees

The current tree category on the site are mainly maple, willow, camphor, metasequoia, acacia and mulberry, most of them distributed in the villages along the river on both sides, some in the farmland. The trees are in good condition, shape beautifully. The height of the tree is more than 7 meters and the trunk diameter is more than 30 centimeters. There is no disease and pest. It is recommended to retain them in the later planning as the landscape tree species.



Legend ● Big Trees

Location of Big Trees  
Made By Author



3.3.2 Village Typology



Village Typology  
Made By Author

### 3.3.3 Architecture Analysis



Legend  
■ Traditional style architecture  
■ Uncoordinated with Uncoordinated



Legend  
■ Architecture with good quality  
■ Architecture with normal quality  
■ Damaged Aechitecture



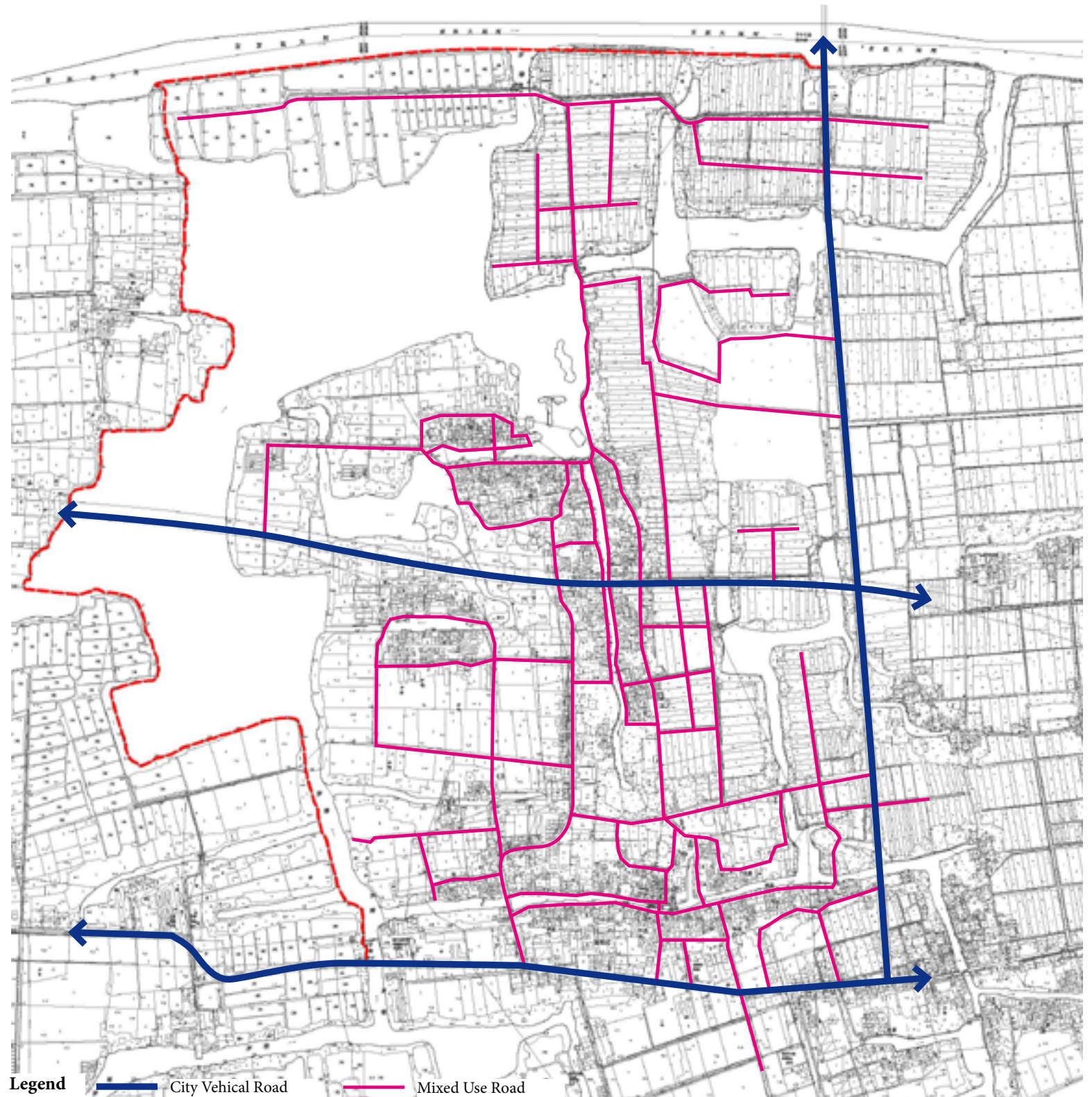
Legend  
■ 1F  
■ 2F  
■ 3F





### 3.3.4 Roads Analysis

There are three main vehicle roads in the site, of which the new 318 National Road go across project site and divided the site into north and south parts. 318 national road leads to the Wuxing district and the Jiuguan town center area.

The existing internal road in the site is a bit messed up, most of them are plowing road and village road. The roads inside the village are pedestrian roads, but there will still be vehicles passing through, which is very likely to cause traffic jams.



Legend       City Vehical Road       Mixed Use Road

Village Roads  
Made By Author

## **4.Planning and Design of Ganglang Wetland Town**

Ganglang has a beautiful natural environment, rich historical resources, convenient location and the local economy is affluent. In order to fundamentally improve the life quality of the people who live here, it is necessary to use the characteristic town method to introducing a relevant industries into this place, to develop the local economy and improve the quality of the space environment. To develop small towns in China in high quality, which is the main content of China's new urbanization. This chapter will explain the exploration development of Jiangnan water town in the background of China's new urbanization, through two aspect, Industry design and Urban/Landscape design.

## **4.1 Industry Plan of Ganglang Wetland Town**

In the first part of this chapter, I will introduce the industrial planning of the Ganglang wetland town specifically. According to the location, natural resources, historical and cultural resources, internal and external conditions of Ganglang to formulate the industrial planning suitable for the current status and future development. The plan include orientation of Ganglang, development strategies, implementation methods, operation management and other aspects.



## 4.1.1 Ganglang's Opportunity

### 1. Location opportunity: The support of the economic and traffic conditions in the Yangtze River Delta

In the high-speed rail era, the economic center of the Yangtze River Delta area is moving into the inner land. Huzhou relies on the traffic advantages to become the focal point of the four core cities. It has great potential to invest in industries, investment, tourist groups.

- Location: Focal city of four important cities, the important transportation hub nodes of the three provinces and one city, and the tourism value is good

- Inner Land Customer: Close to Hangzhou, Suzhou, Hefei and other big cities, Nanjing megacities, Shanghai super cities, make the project owns tens of millions of customers

- Economic strength: Huzhou's GDP2243 is billion yuan, the province the fourth of the province; the total financial revenue is 36 billion yuan, the third of province. The economic basis is good.

Tourism: Tourism is Huzhou's pillar industry, Huzhou China's rural tourism city; there has been received 23,527,100 tourists, the total operating income is 40 billion yuan and it is transforming from the "rural tourism " to "village life ", a good momentum of tourism industrial.

### 2. Market opportunity: tourism consumption in the era of public leisure

China's tourism has entered the era of public leisure. Family tours represented by parent-child tourism and parents travel become the tourist consumption market.

Travel ratio: Family tourism accounted for 60%, followed by friends travel, accounting for about 20%. 61% the consumer plan is willing spend more on travel cost, giving back to themselves and the family. Nearly 70% of the tourists choose to travel in the way of driving to the countryside.

Experience consumption: for example, the cost of cultural entertainment, theme hotel, tourist goods and destination life experience will be further expanded. The Yangtze River Delta area cities accounted for the first and second of the top ten tourism.

Family Travel: the data in 2012 showed that Chinese urban residents travel 920 million times in family units and travel rate reaches 245%. With the implementation of the second child policy, 2+2+4 (two adults, two children and four elders) will become the main family structure of China in the future.

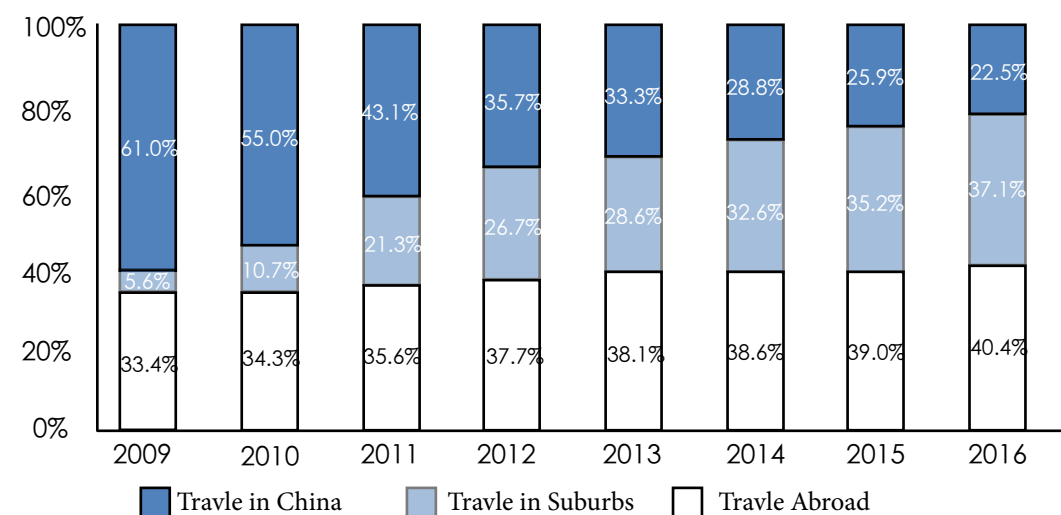
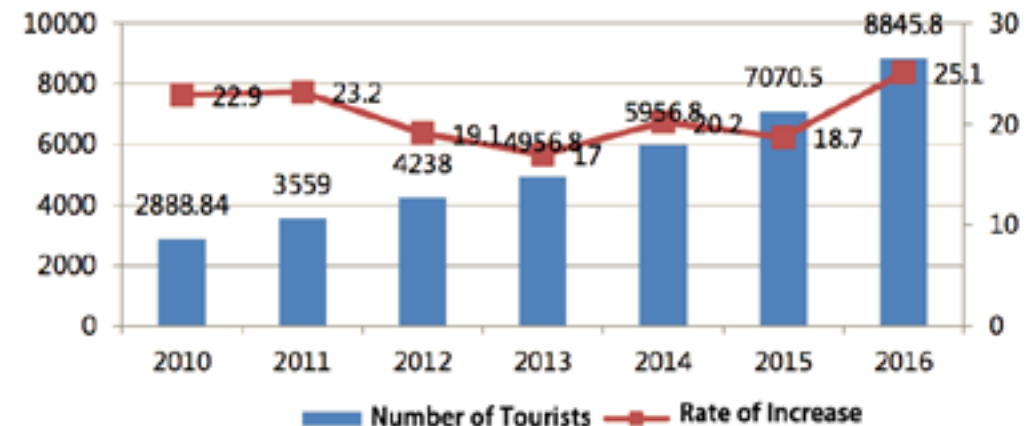
### 3. Suburban tourism opportunity: the Yangtze River Delta as the core customer market of suburban tourism

Suburban travel has become popular, the fast development accounting for nearly 30% of domestic tourism market

Near Distance: nearly 70% customers choose 100-300km (1-3 hours drive) as a suburban tourist destination.

Transportation is convenient: the popularization of cars and the development of high speed rail make it more convenient to reach the destination.

Saving time: the customers can use the weekend, the Spring Festival, the Dragon Boat Festival and other small vacation to carry on the trip to suburb.



Tourist Number, Change Rate and Destination Rate  
Data Source: 2017 China online Tourist Holiday Market

## 4.1.2 Case Study: Japanese Village

Cause:

- The decline of the first industry gave birth to a new economic growth point.
- Tourism demand for "localization" regression
- The demonstration and linkage of the rural elite

Phase:

The first stage: the government and the private sector to push the development and operation of refined luxury resorts, including home stay hotels.

The second stage: ecotourism, agricultural experience type leisure tour combine with the rapid development of rural tourism.

The third stage: the new period of leisure agriculture and rural tourism.

| Type             | Activity            | Theme                                    | Content  |
|------------------|---------------------|--|--|
| Sightseeing Tour | Seasonal orchard    | Agricultural garden for sightseeing      | Watching, picking, learning and so on.   |
| Leisure Travel   | Leisure Farm        | Amusement park                           | Integration of agricultural production, agricultural products consumption and leisure tourism as a whole |
|                  | Farm House Stay     | A holiday Inn for people from big cities | The best accommodation for tourism and leisure holidays  |
| Village Culture  | Children Experience | The classroom of rural knowledge         | Experiential tourism of urban children's agricultural knowledge education                                |
|                  | Nursing Care        | Return to the natural nursing home       | A tourist resort of nursing, leisure and health care services for older people over 65 years of age      |

Type of Japanese Village Tourism  
Made by Author

### Japan's most beautiful village, Hezhang village.

Hezhang village is located in Gifu County in the foothills of the Baichuan Town, "Hezhang Build" house constructed about 300 years ago in the Edo period. There are 732 households in the village, with a total of 3120 rural population.

The village has a leading performance in the cultural heritage protection and inheritance in the world, inherited and created a series of unique local culture protection measures. Hezhang Village is known as the "beautiful village of traditional Japanese style".

Development and protection measures:

- Protection of ecological architecture
- Formulating the rules of landscape protection and development
- The establishment of the museum.
- Combination of tourism landscape and agricultural development
- Development of traditional cultural resources
- Construction of Commercial Street
- Combination of home stay hotel and Tourism
- Joint establishment of natural environment protection base with enterprises

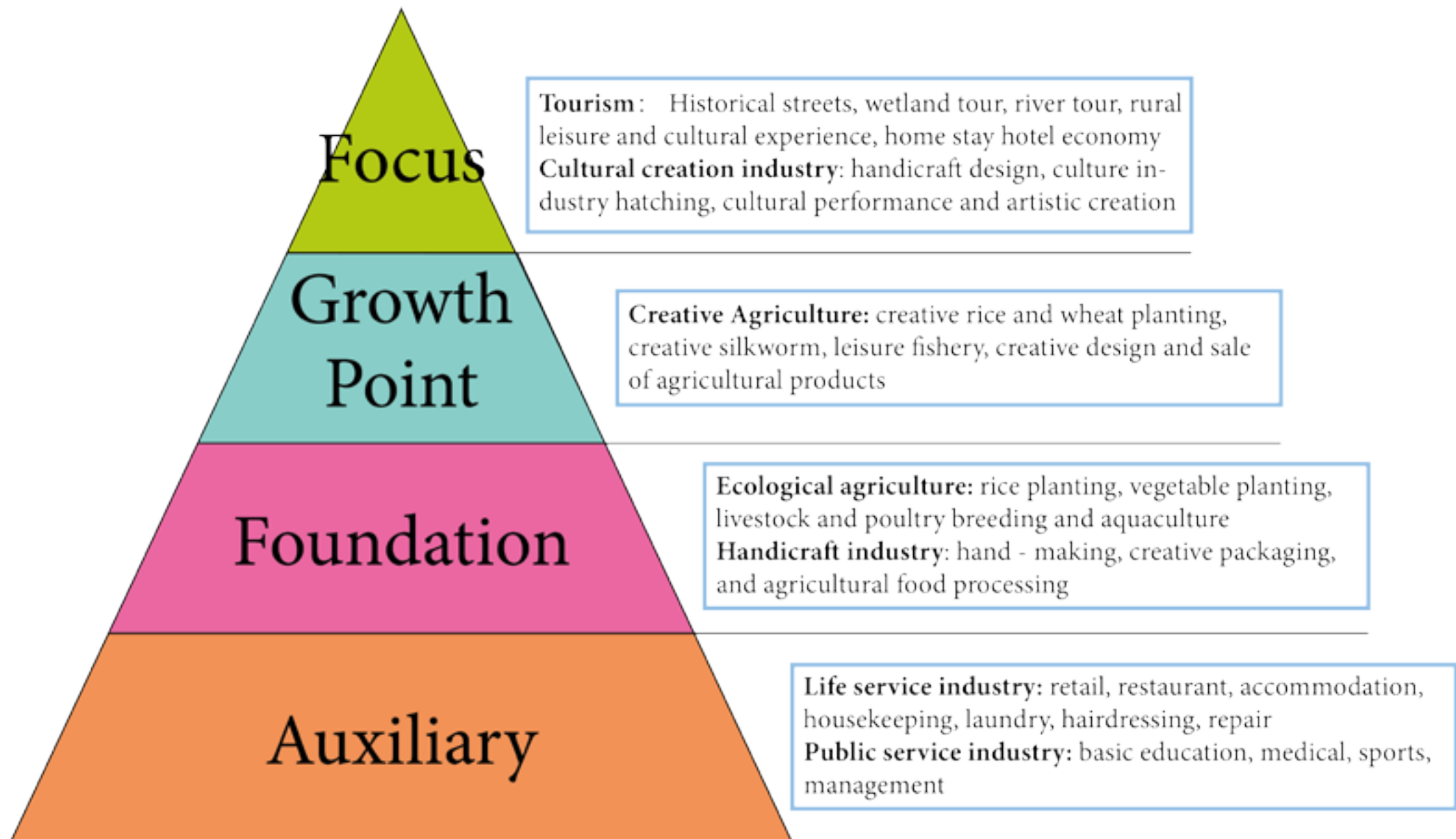
Lessons from it: from the experience of rural development in Japan, we can learn from their concept of rural life, the revival mode of rural economy, the extension



Hezhang Village  
www.baidu.com

### 4.1.3 Industry Orientation

The industry planning is using the culture of water town as the theme, guided by cultural tourism, based on agriculture and combined with many other industries. It will create a original style of the New Jiangnan water town and rebuild the Nanxun for the new era.



Industry Orientation Structure  
Made by Author



## 4.1.4 Develop Strategy(1)

**1. Community Forming:** in order to activate the village culture, developing the village economy as the basis to build community sense and ecological restoration as the concept.

- Draw on the concept of production, life and ecological integration to develop the rural economy. Referring to the Japanese mode, we will combine the sightseeing together with rural community, tourism and sightseeing, cross the boundaries of life and sightseeing, combine daily life with sightseeing and let life itself become tourism.

- To expand the Ganglang economy by tourism and attract local entrepreneurs to return home to drive the economic development.

- Crop production and management breakthroughs. On the basis of traditional farming methods, combined with on-line business, we develop diversified business models to enhance the potential value of agricultural products, and learn from Japan's "one village, one product" to achieve the ultimate mode.

- The rural development model of the new farmers. The model of industrial capital is introduced to develop professional farmers, and the construction of the charismatic countryside under the cooperation of enterprises, farmers and the government is implemented.

**2. Innovation and integration:** take the life of Jiangnan Water Village as the theme, integrate culture into agriculture, tourism, literary creation, modern technology and residents' life, form multi way of integration and innovation, generate new industry and stimulate new motivation. (See Image ...)

- The integration of traditional culture and modern culture
- The integration of traditional culture and Tourism
- The integration of traditional culture and agriculture
- The integration of traditional culture and cultural innovation
- The integration of traditional culture with modern science and technology



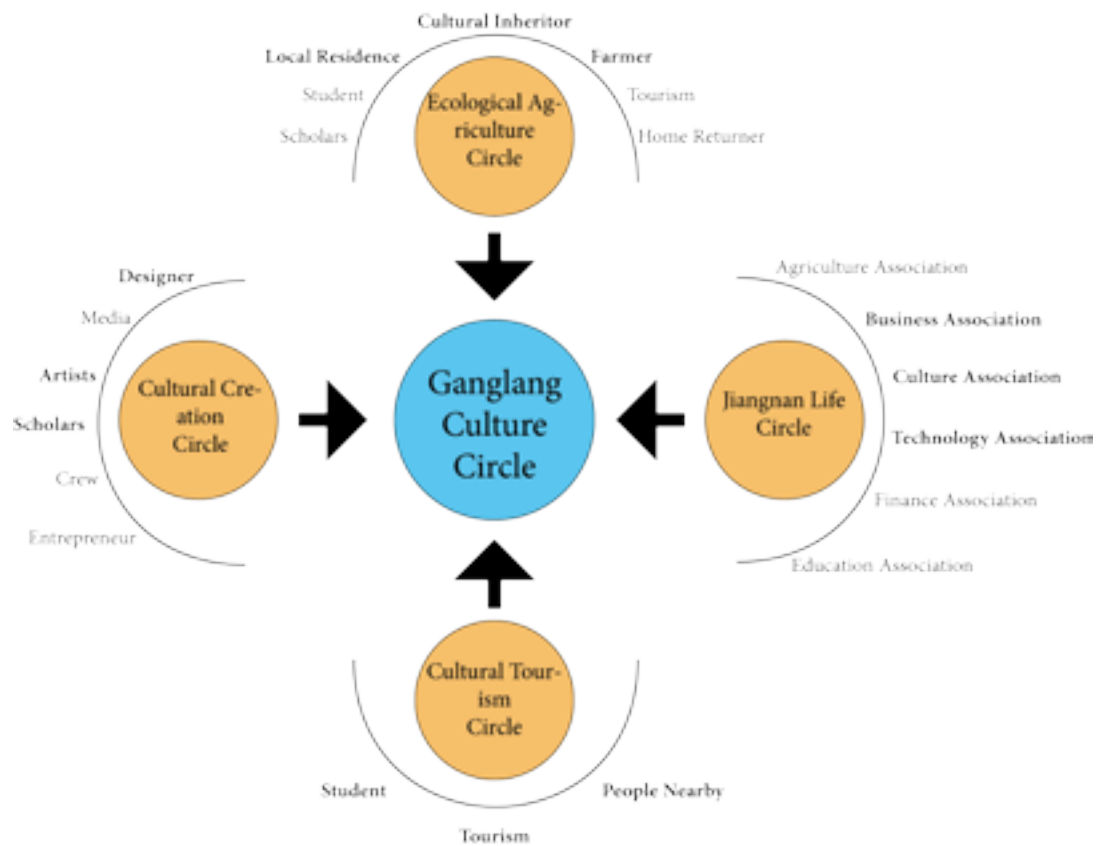
Industry Intergartion  
Made by Author

## 4.1.4 Develop Strategy(2)

**3. Focus on the theme:** the project will focus on the three themes, the wetland, the historic town, and the leisure life to create Ganglang Wetland town. The main design elements are lake, field, river, forest, pond and house.

**4. Gathering talent people together.** Use creativity as the core, based on agriculture, build four industrial ecosystem of Ganglang, to attract all kinds of literati gathered

- Attract home-return and creative people
- Attract a literary artist
- Attract suburban tourists
- Attract industrial workers
- Attract retired elderly and farming scholars

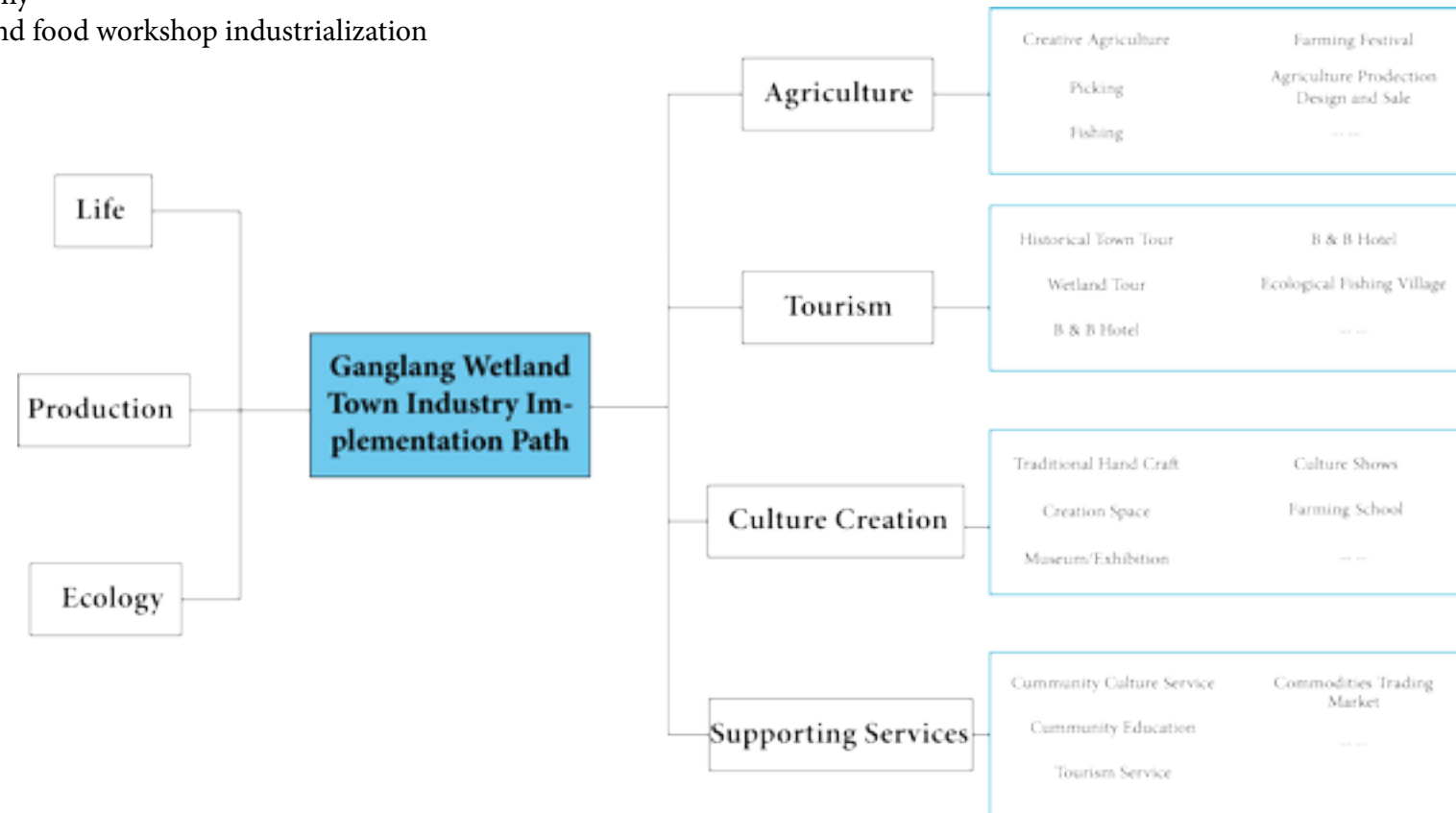


Talent Gathering  
Made by Author

## 4.1.5 Implementation Path

The industrial implementation of the Ganglang wetland town has the following ways:

- Creativity of agricultural industry
- The aggregation of literary creation industry
- Deep development of tourism industry
- B & B economy
- Handicraft and food workshop industrialization



Implementation Path Structure of Ganglang  
Made by Author



### 4.1.5.1 Creativity of Agricultural Industry

Use Mulberry fish ponds, rive fish ponds as basic, collect "rice and wheat, mulberry, fishery" elements integrate into the local culture, creativity, science and technology; meet consumer demand, build multi industries integration of "agriculture + culture + Creative + technology + life mode".

Industrial chain extension and activation:

- Creative rice and wheat fields
- Mulberry picking leisure park
- Ecological leisure fishing Garden
- Popularization of agricultural science and technology
- The experience of rural farming
- Creative agricultural products

#### 1. Creative Theme Farm

The theme farms are built with the creative industry chain model, and the tourism function is strengthened.

Creative planting farm: taking rice and wheat as the main corp, planting vegetables, fruits, flowers and so on, adopting colorful creative planting mode to form an ornamental pastoral landscape and experiential game plant maze.

Family Farm: a kind of public paradise for family pleasure and experience by agriculture sightseeing, picking and farming experience.

Creative Workshop: agronomic rice and wheat, flowers, vegetables and other as raw materials, to make rice art, hand woven goods, rice and wheat straw (rice straw) art, painting decoration design, creation and DIY workshop experience

Agricultural products shop: provide customers with organic rice and wheat products, handicrafts and other creative products sales service

#### 2. Silkworm mulberry industry chain

With mulberry culture as the main body, planting also some the mushroom, flowers, herbs planting, to form the mulberry picking garden landscape; with mulberry culture as the core, to extend the industrial chain, the formation of mulberry planting, silkworm breed and mulberry leaf as tea, mulberry fruit picking and mulberry product processing, integrate picking, processing, leisure, health care in one.



Creative Theme Farm  
www.baidu.com

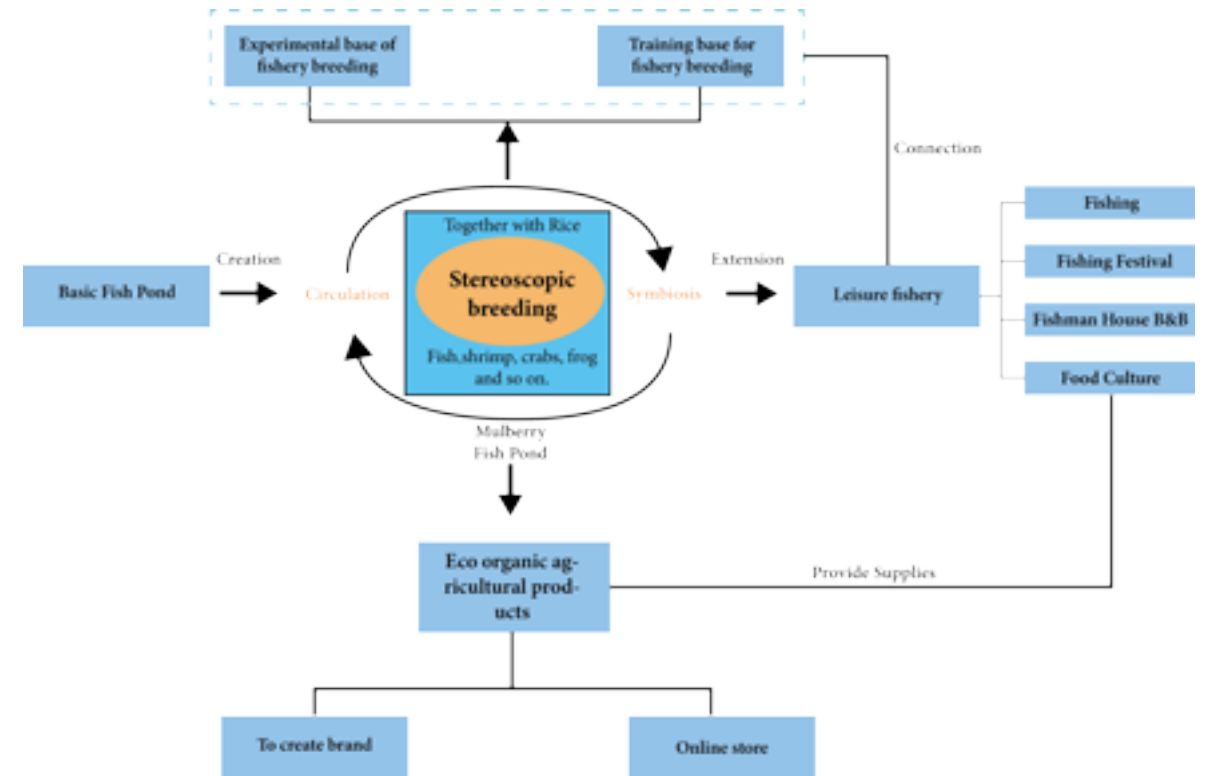
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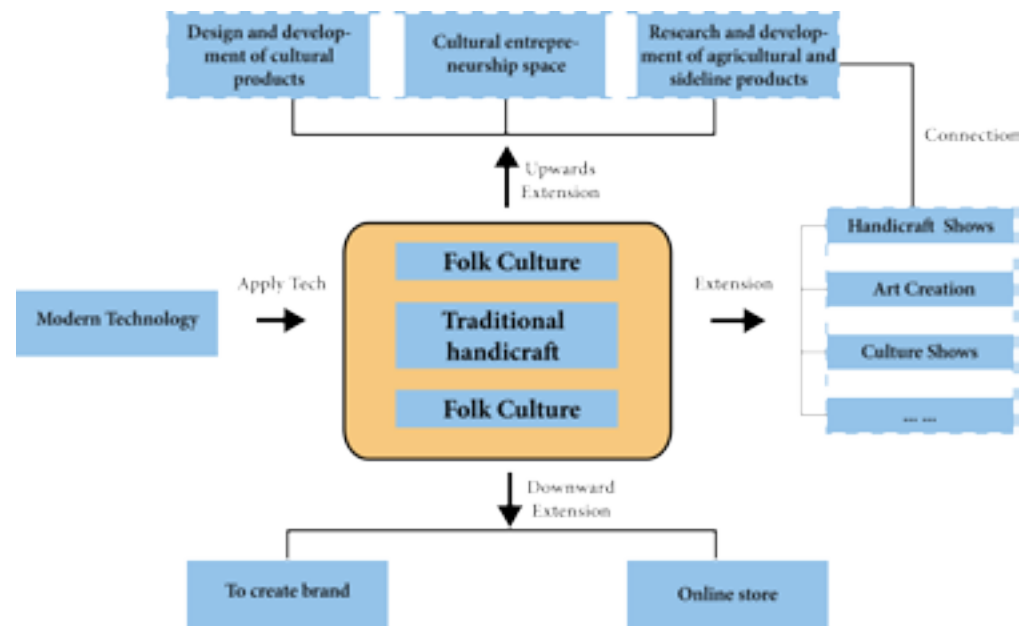
## 3. Industrial chain of ecological leisure fishing Park

The innovation of fishery industry form, promote the traditional fishing pattern transformation, to form a multi industry symbiotic system, build the production, leisure, brand and sale multi-dimensional ecological fishery chain development system



## 4.1.5.2 Aggregation of Culture Creation Industry

Use local traditional crafts heritage and recovery as the core, introduced the creation and design of arts and culture in the industry, encourage youth and the returner to develop experience products, extend and expand the industrial chain, foster the development of traditional arts and crafts, cultural and artistic creation, and cultural tourism product design and development, craft art supplies manufacturing industries.



Culture Industry Aaggregation  
Made by Author

### 1. Traditional handicraft display

To restore and make use of the traditional handicrafts of Jiangnan, and to carry out various workshops, fine arts, silk, arts and crafts exhibitions and creation stores

- hand workshop: silk floss quilt, Nanxun small carpentry, organic rice processing, mulberry fruit processing, straw painting
- Food industry chain: Tea / wine / coat cloth / fish / tobacco / sugar / salt / rice / noodle and food industry chain
- Art fairs: including handicrafts and local delicacies, handicrafts, art and crafts, as well as local food sales

### 2. The culture creation of space

Creative design studio and artist studio, youth workshop, peasant farming research laboratory, School of cultural and farming to create learning atmosphere, let artists communicate and learning from each other, do promotion and sales.

- Youth studio
- Art Museum
- Silk exhibition hall
- Cultural Media Center
- Cultural exchange platform



Local Handcraft  
www.baidu.com



Art Workshop  
www.baidu.com

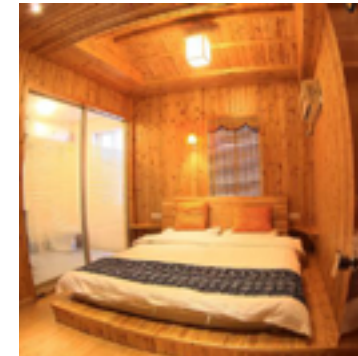


### 4.1.5.3 Deep Development of Tourism Industry

On the basis of protecting and restoring the traditional village environment, we should mobilize local residents to participate in tourism development, activate the original culture of Jiangnan Water Village Culture, upgrade their tourism experience, and create the most attractive tourist product in the Jiangnan lifestyle. The horizontal extension based on the traditional tourism industry chain, integration, connotation "new business, culture, leisure; longitudinal activation, drive the development of the upstream industry of agriculture, traditional handicraft industry, passenger travel, into the Jiangnan cultural theme, improve the quality of tourism and the connotation, form the scene area tourist experience. With the increase of vacation tourism, healthy tourism and business tourism products, the six elements of traditional tourism "food, housing, travel, tourism, shopping and entertainment" have become nine elements of "food, housing, travel, tourism, shopping, entertainment, business, maintenance and leisure", increasing the thickness of tourism experience. Through tourism, the development of related industries, such as characteristic agriculture, traditional handicraft industry, water tour, housing rental and other related industries, has promoted the enthusiasm of residents and increased the breadth of tourism experience. To activate the local culture and infuse the soul into the tourism activities, the cultural tourism will blend the general sightseeing and leisure into the cultural scene experience, and deepen the depth of the tourism experience.



Food



Stay



Travel



Tourism



Shopping



Entertainment



Business



Health



Leisure

Nine elements of Tourism Industry  
www.baidu.com

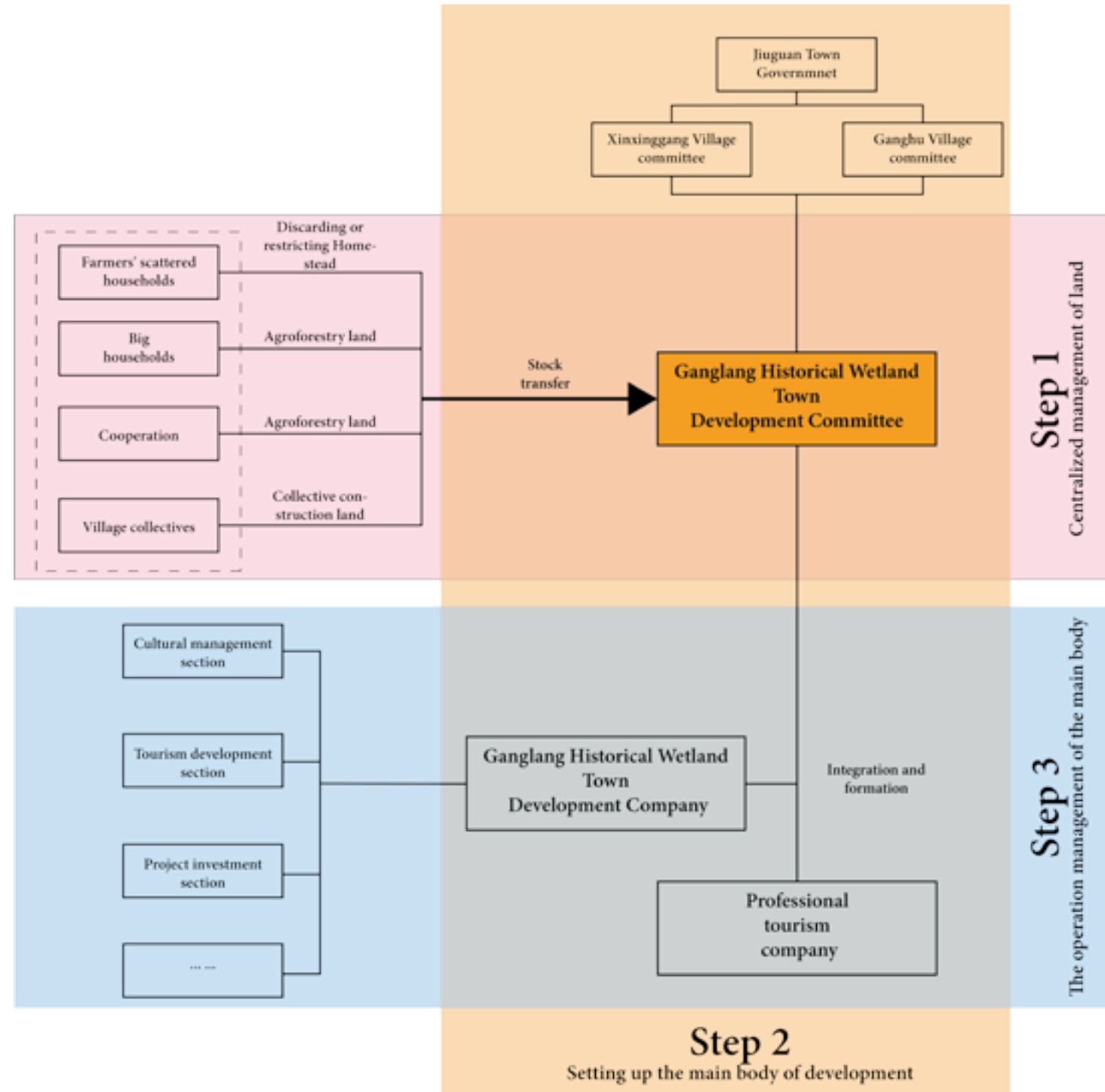
## 4.1.5 Operation Management

### Innovation strategy of project management

The first step, the establishment of the Ganglang Wetland town development committee, to centralize scattered land and integrated management, concentrated the resource in the Committee. The committee is composed of the Jiuguan government, the Xinxinggang village and the village of Ganghu, and the villagers are involved in the development and operation of the Committee.

The second step is to form the main body of development. Bring in professional tourism company to form Ganglang tourism company to gather with the town committee.

Thirdly, determine the main body of the operation. It is operated by the professional tourism company, the small town committee is supervised and managed in the form of cooperation.



Project Management  
Made by Author

## **Innovation of operation mechanism**

The government has unified management and the professional company operates. The Giuguan government has unified management and guidance in terms of policies, development concepts and ideas. There should introduce a professional tourism company to the specific operation of the Ganglang wetland town.

### 1. Service-oriented government

- We should advocate a service-oriented government to strengthen the infrastructure of tourism and the infrastructure of the villagers' life, improve the facilities and enhance the ability of tourist reception.
- The Giuguan government introduced tourism investment preferential policies to attract investment, try the transfer right of operation of scenic spots, and gradually realize the separation of management rights and operation rights, mutual supervision and establish a benign interaction between government and enterprises.

### 2. Active marketing, strong guidance

- The government takes the lead in forming a tourism marketing team, launches the tourism marketing of the Ganglang Wetland town in view of the target market, and actively convene the tourism promotion conference, and promotes the development of the ancient wetland town by using all kinds of festival activities.

### 3. Build brand, expand popularity

- From product management to brand management, we should enhance uniqueness of wetland gardens, historic towns and leisure life, and form distinctive brand of Ganglang tourism.

### 4. Enterprise operation, all parts participation

- We should give full support to professional tourism companies' work in the tourism image, brand, rural tourism development, operation and management, and carry out socialized operation to promote the rapid development of Ganglang.
- In the process of promoting, supervision and renovation of Ganglang's tourism, the citizen should take part in the work to realize the goal of public participation.

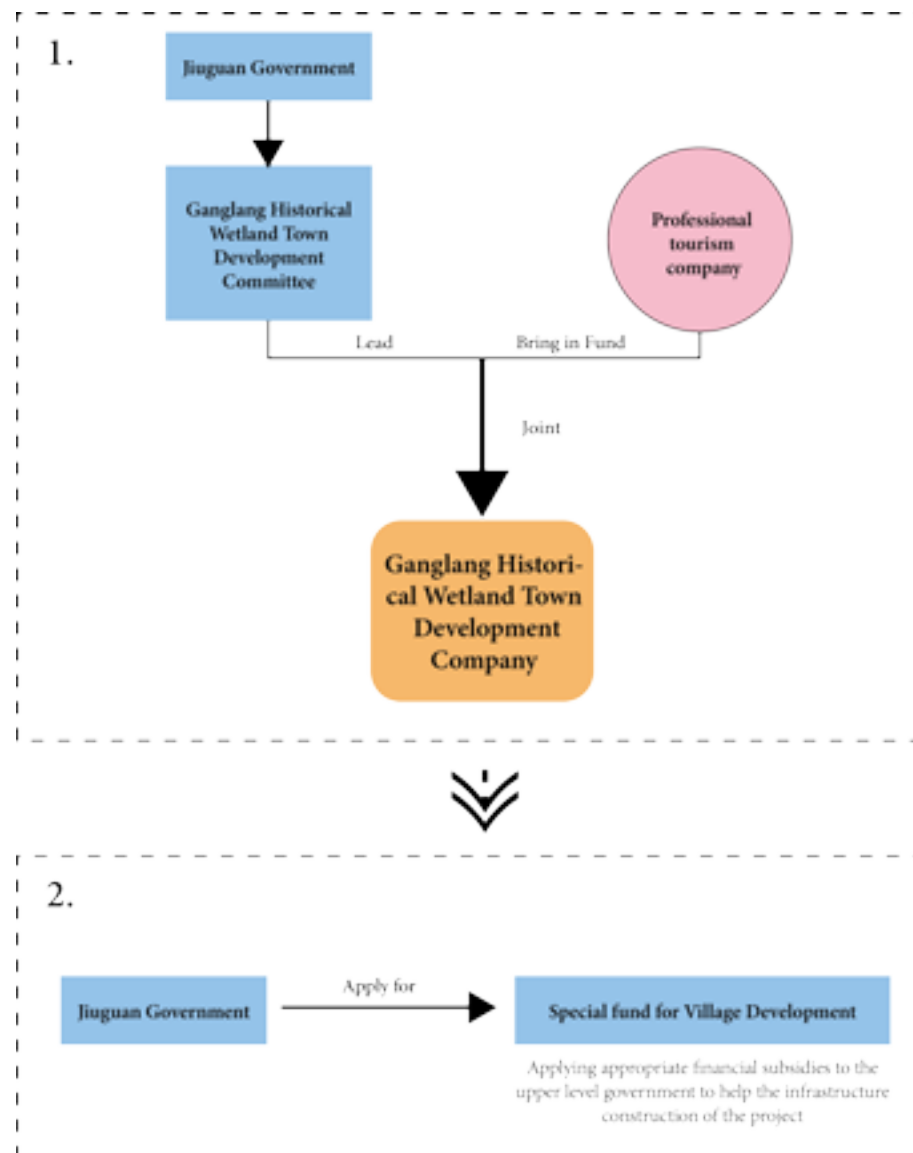
### 5. strengthening the supply side reform of tourism

- Keep pace with the changes and demands of the external market environment, and constantly innovate the development mode of tourism products, pay attention to the improvement of the quality of tourism products, and meet the new requirements of tourists.
- Integrate resources, promote "tourism +", "tourism + agriculture fishery", "tourism + culture", "ancient town + culture" and other mode.



## Project financing method and sources of funds

We mainly use the financial investment from professional tourism companies and the financial subsidies of the government to carry out a unified development and management of Ganglang wetland town



Project Funding  
Made by Author

## Project advertisement and marketing strategy

There are short term goals and long-term goals, short-term goals focus on efficiency, long-term goals are both phased and systematized.

Short term objectives:

- Promotion of popularity: Event adverting
- Increase the number of tourists: subdivide the market for different customer groups
- Build core attractions: building core products, integrating and promoting excellent tour routes
- Improving the appearance of the ancient town: improving the infrastructure and improving the quality of the village name

Long-term objectives:

- Town brand building: phased implementation
- Set up the characteristic image: refining, popularizing, market penetration
- Cultural tourism industry: the formation of the tourism industry at the ancient town culture and the natural scenery of the wetland

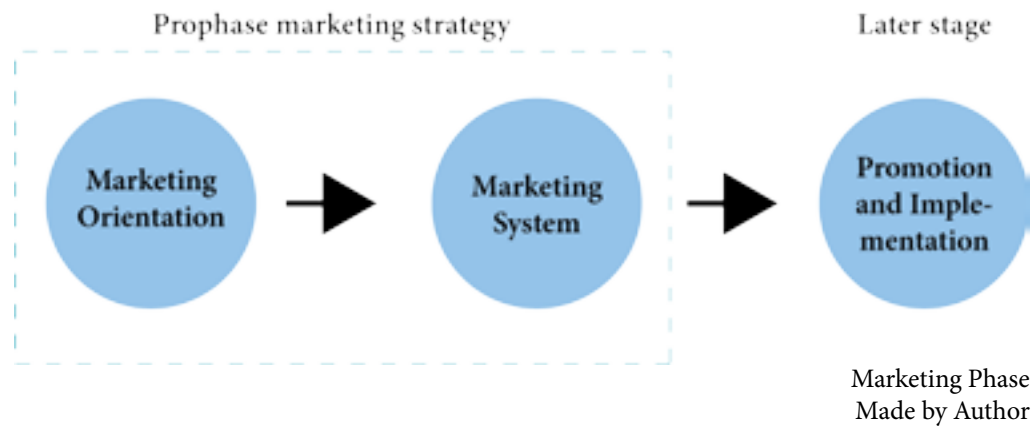
Marketing phase division and the work content of each stage: prophase marketing strategy and late promotion execution(see Image...)

Prophase marketing strategy

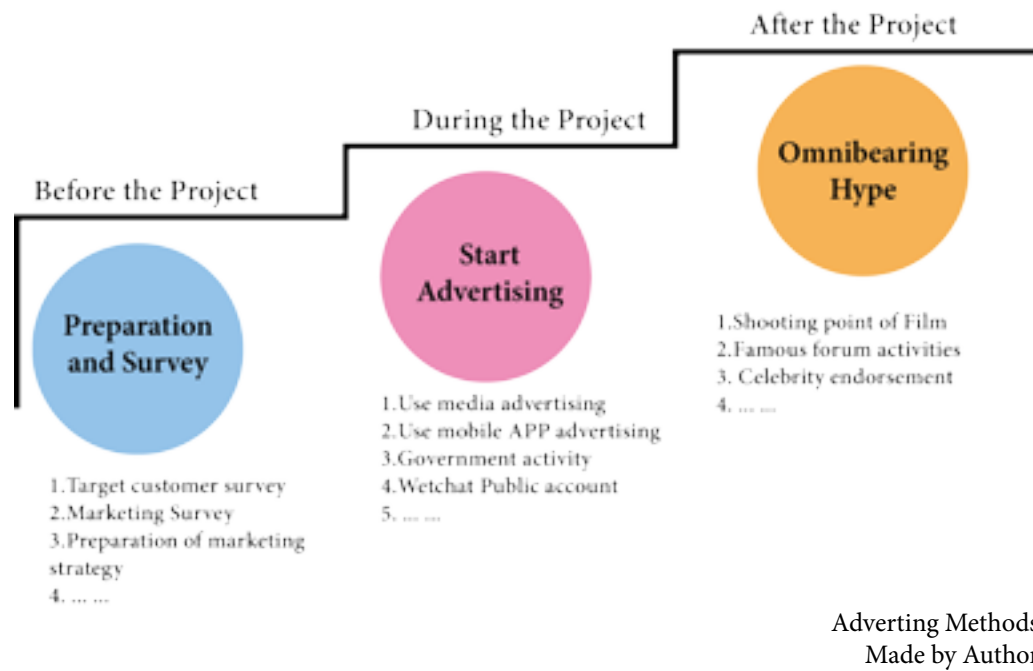
1. Marketing positioning: Establish the market positioning and image positioning, aiming at the target market to formulate propaganda slogans and preliminary promotion strategy.
2. Marketing system: according to the problems and target face, with the first phase of the preliminary positioning and strategy to continue to deepen and formulate marketing system, including organization structure suggestion, overall goal and stage goals, promotion suggestions, the marketing methods of each stage, marketing events and so on.

Late promotion and Implementation

3. promotion and Implementation: according to the objectives of each stage, we should formulate specific implementation plans and operation rules; integrate the popularize resources and connect various promotion channels (media), activity companies, advertising companies, etc., and implement each activities.



Adverting methods: WeChat and other new media method, event adverting, basic marketing and traditional marketing







## 4.2 Ganglang Historical Wetland Town Landscape and Urban Design

The planning and design of Ganglang wetland towns is to create a "miniature space" full of history, culture, life, memory and inheritance in the old town. It makes people wander and deeply appreciate the scenes, culture, lifestyle and artistic conception of the waterways.

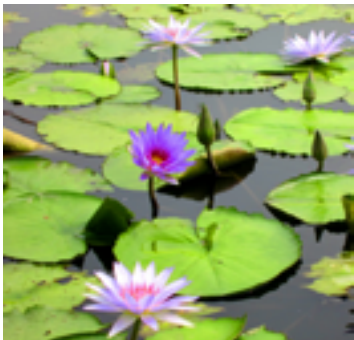


**Planning Concept and Main Elements**

**Pastoral Wetland**

**Historical Town**

**Leisurely life**



**Lake**

**Field**

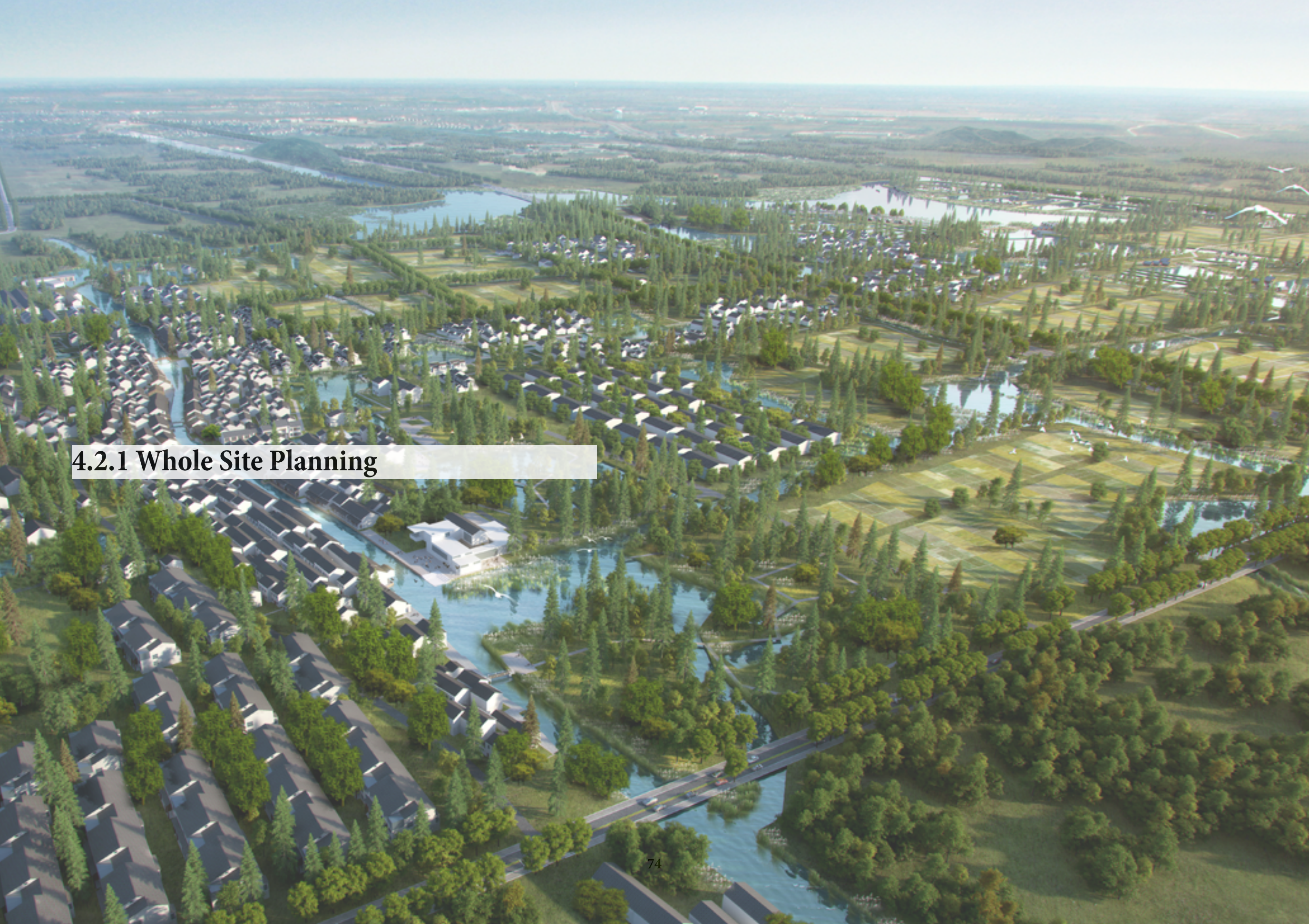
**River**

**Forest**

**Pond**

**House**





## 4.2.1 Whole Site Planning



Master Plan





## Planning structure

### One axle, Two core and Four area

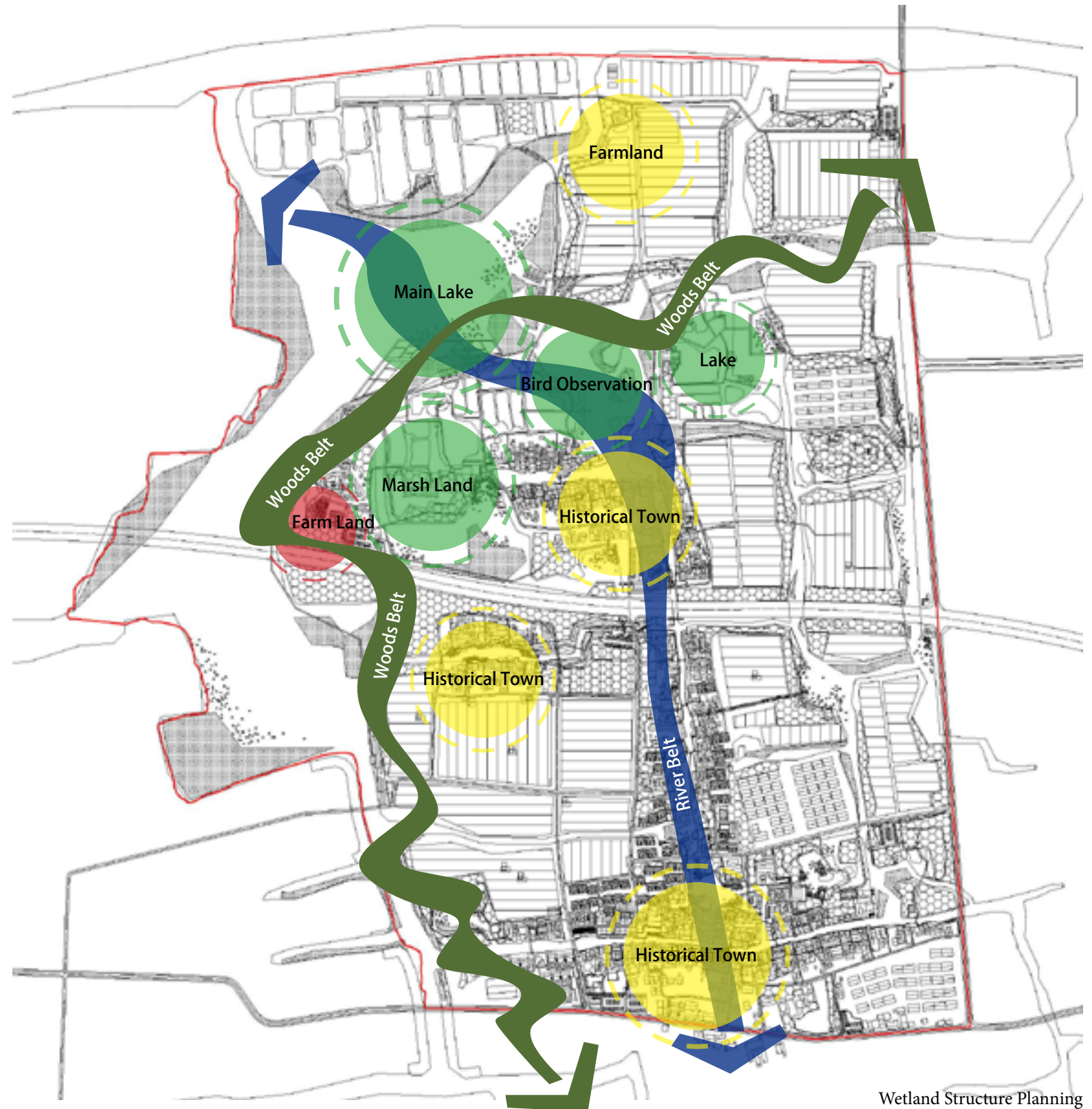
One Axle, to connect north and south water system and land area. It is the main axle goes through the whole project. It is also the traffic axle, green axle and water axle in each area.

Two Coreone cor, indicates the Ganglang historical water town villages area in the south part, it is the center for the viable community life, provide all kinds of living service; another core indicates the wetland area in the north. Present the beauty of nature landscape.

Four areas, according to the planned function, the site is divided into four areas. Starts from the south, they are Ganglang historical watertown cultural area, sightseeing agriculture conservation area, wetland landscape area and modern farming Experience Area



## Other Axis and Planning





## Wetland Functional Zoning

Through sorting out the current water sources and understanding the internal situation of the site, we divided the wetland into five functional areas: the key protected area, the research management area, the exhibition area, the sightseeing activity area and the channel protection area.

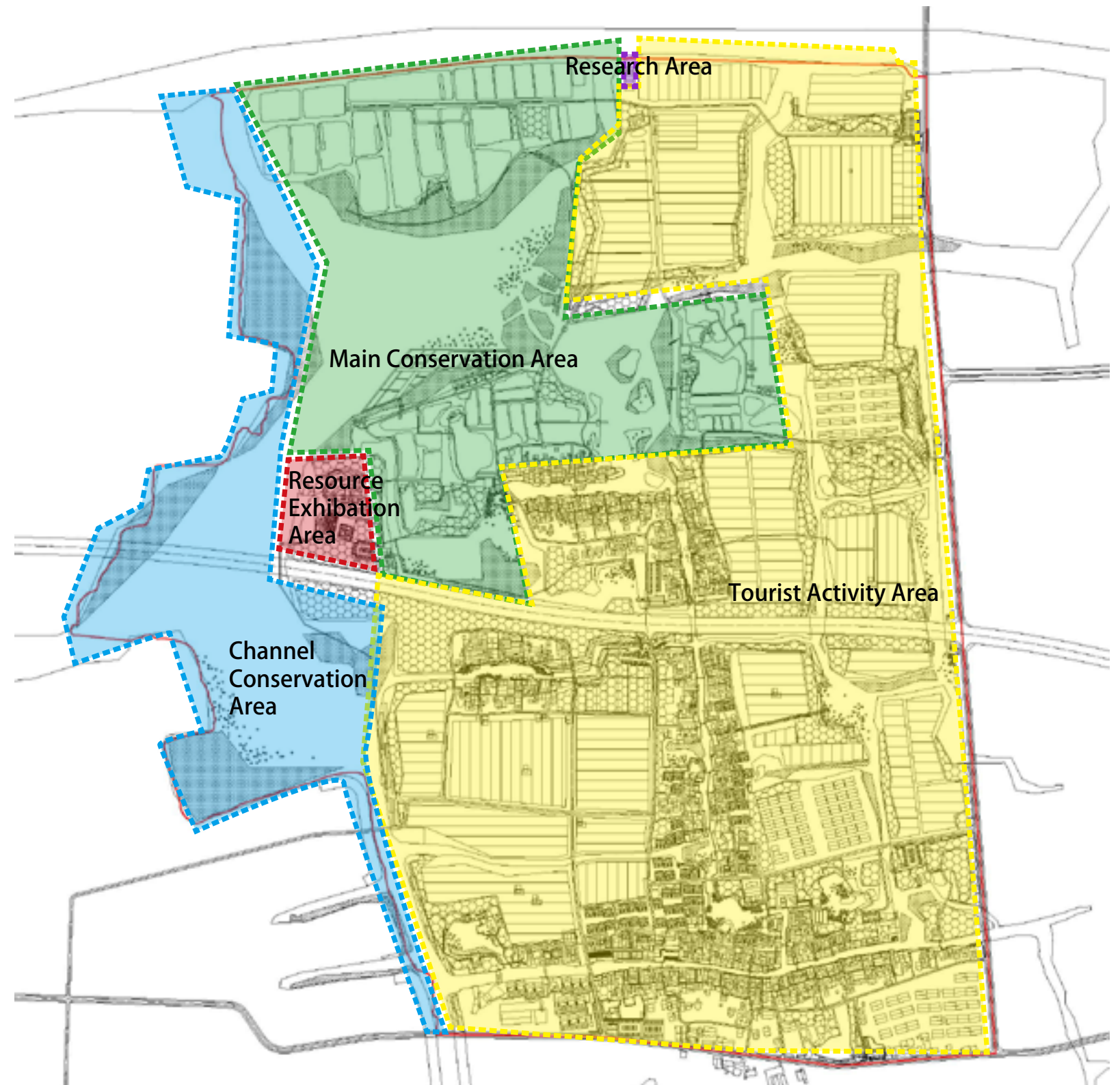
1, Key protection area: located in the northwest area of the base, accounting for 25% of the site. Key protected areas should be used to limit the entry management mode, to protect its ecological system integrity, protection of the rich diversity of species.

2, Resource exhibition area: located on the north side of the new G318 national highway, which accounts for 6% of the total area of the site. The area with 10% impermeable ground area is mainly used for the construction of science education and educational activities.

3. Research management area: with small volume buildings and low energy consumption buildings. The management and Research on the key wetland protection areas are carried out in this place.

4. Sightseeing area: sightseeing activity area accounts for 60% of the site. Most of them are water system, agriculture and village settlement.

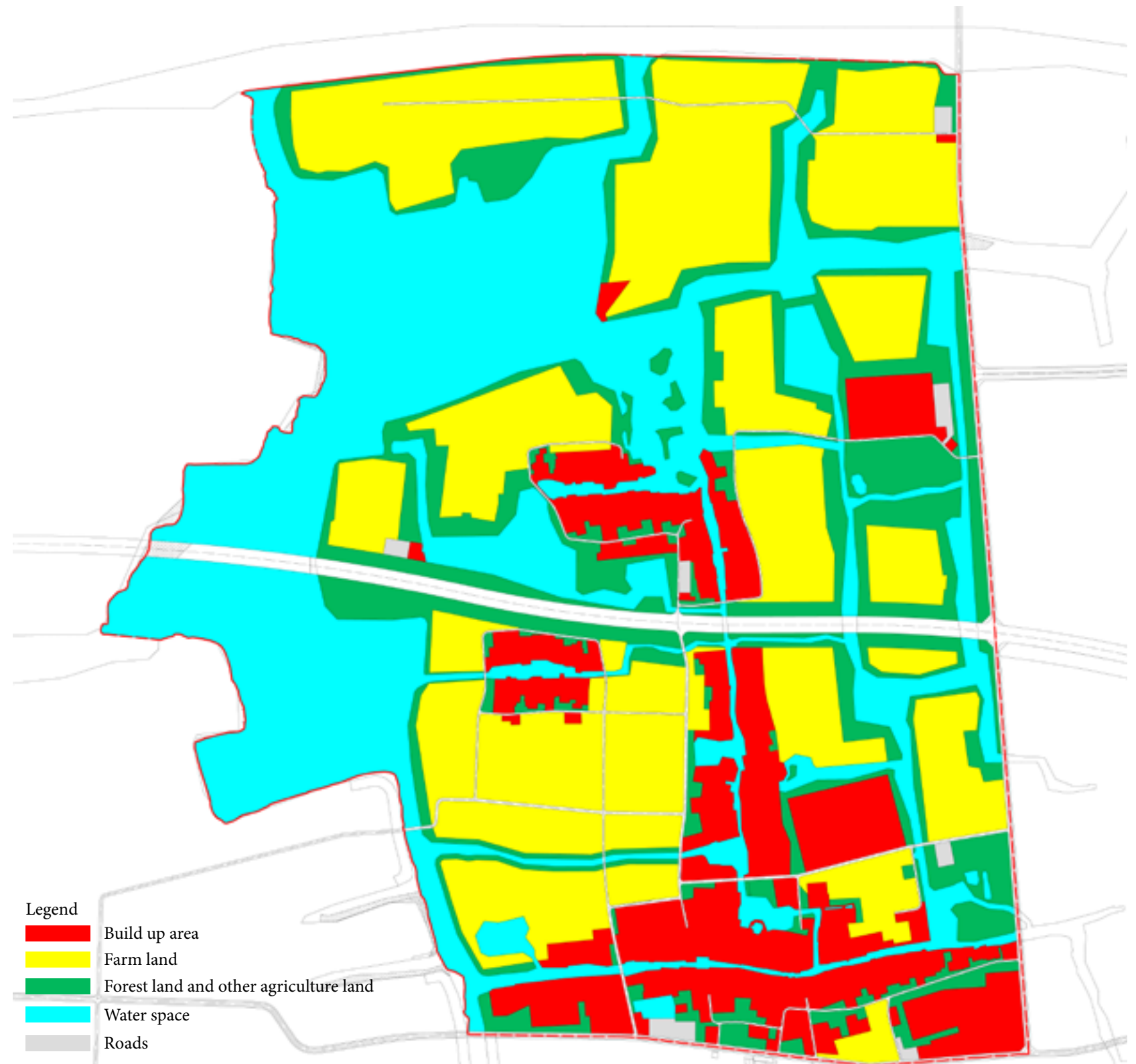
5. Channel protection area: because there is a used waterway in the range of wetland, so the area should do regular dredging work, in the mean while, avoiding the environmental impacts of waterway cargo to the wetland protection zone.





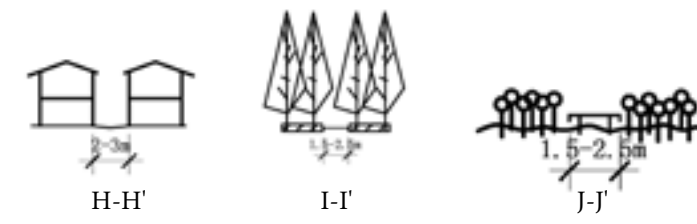
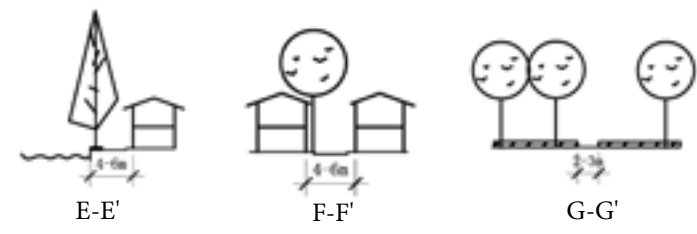
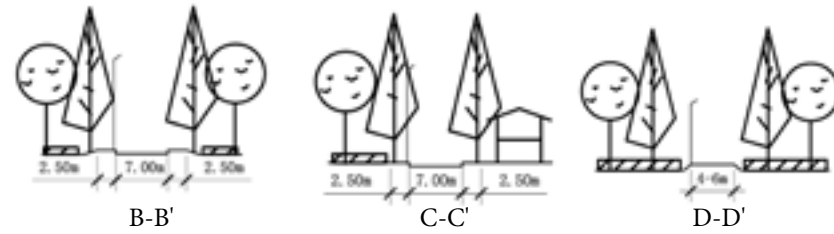
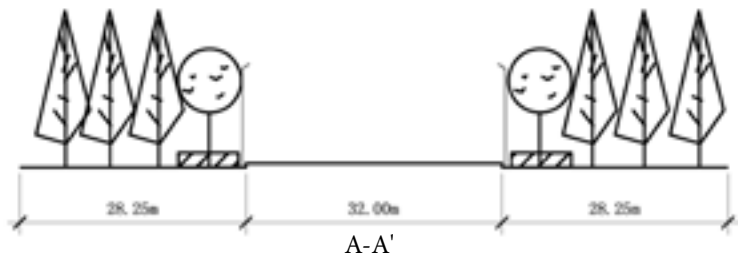
## Land Use Planning

| Planning land use index |               |       |
|-------------------------|---------------|-------|
| Item                    | Area(Hectare) | %     |
| Construction Land       | 36.4          | 13.8% |
| Road                    | 12.7          | 4.8%  |
| Farm land               | 84.1          | 32.0% |
| Forest Area             | 43.7          | 16.7% |
| Water Area              | 86.1          | 32.7% |
| Total                   | 263.0         | 100%  |



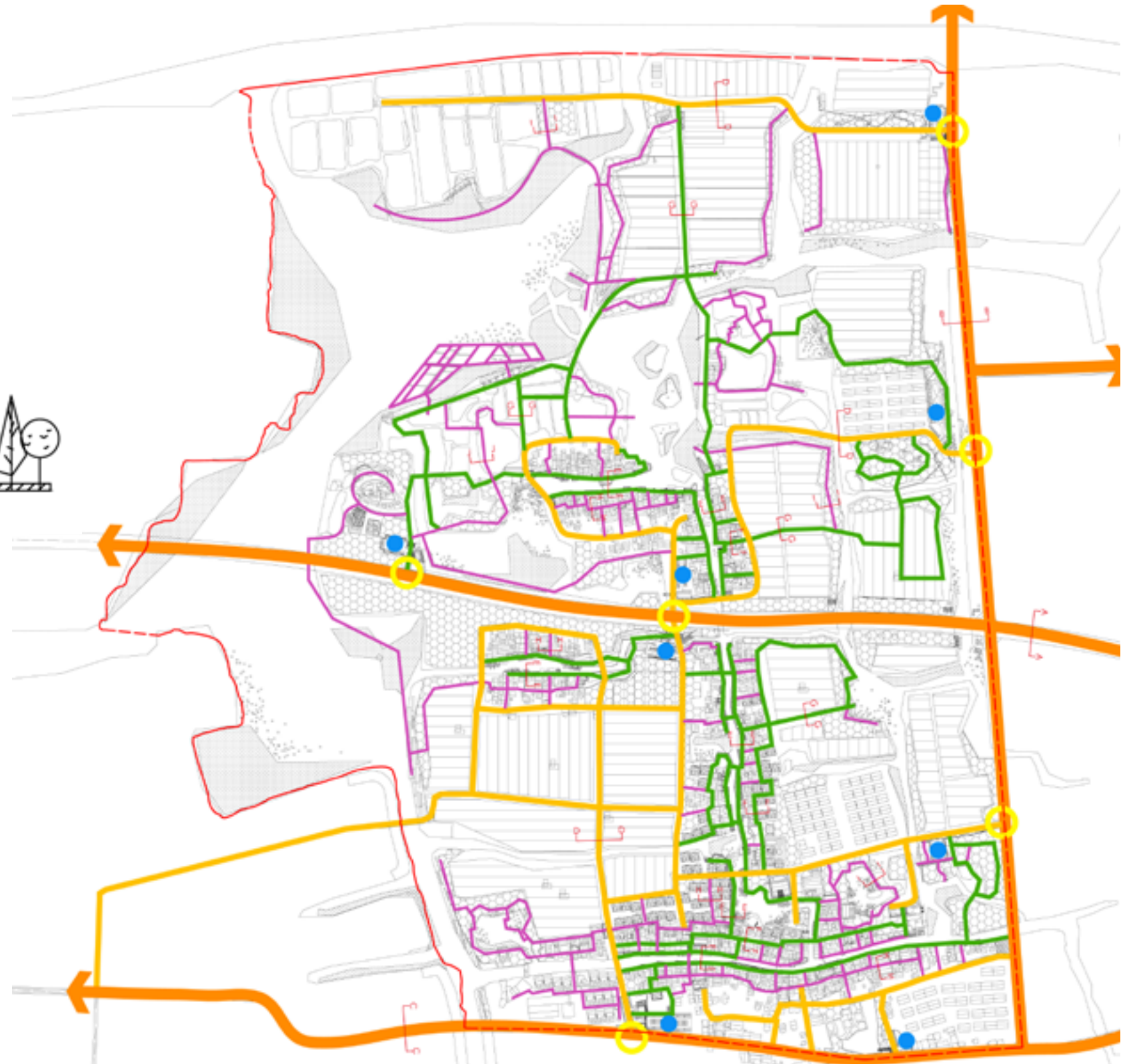
Land Use Planning  
Made by Author

# Traffic Planning



## Section

- Legend
- City Roads
  - Primary roads 4m-6m
  - Secondary roads 3m-4m
  - Tertiary roads 1.5m-2.5m
  - Main entrance
  - Parking lots





## Water Network Planning

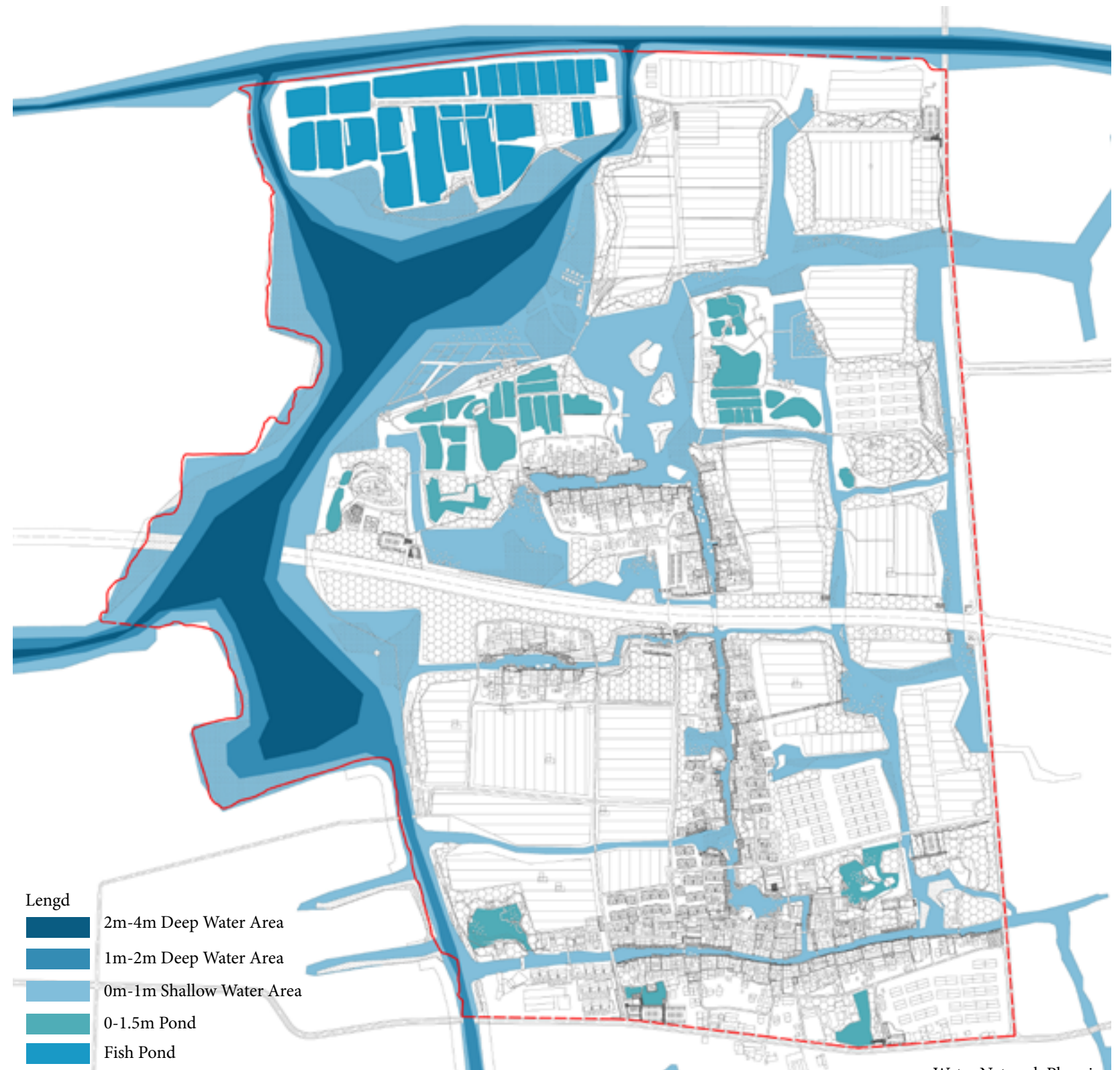
### One axle, Two core and Four area

It is a rearrangement for the water network base on the current situation. Make sure the inside water network is unimpeded and conneted with the external water.

The water network is divided into lack, pond and fish pond.

The water connect with external water system possess the self cleaning capacity. Connect the internal water area with each other through pipes to form a running water system.

The north pond is transfer from the old fish pond. As marshland, it can be used as the aquatic bird conservation area.





# Boat Route Planning



## Revetment planning

According to the present situation of revetment, summed up the following six forms of revetment.

- A: Forest slope revetment
- B: the last step protective bulkhead
- C: Sandy shoal revetment
- D: flood control hard revetment
- E: Waterway protection Revetment
- F: Landscape slope embankment

Mainly divided into hard and soft embankment. Except for the existing hard revetment, wetlands revetment is new designed, combined with the underwater shoal, to create a cultivation space for aquatic plants to purify water body. The design of revetment is to use gravel replace the artificial masonry above the natural surface.



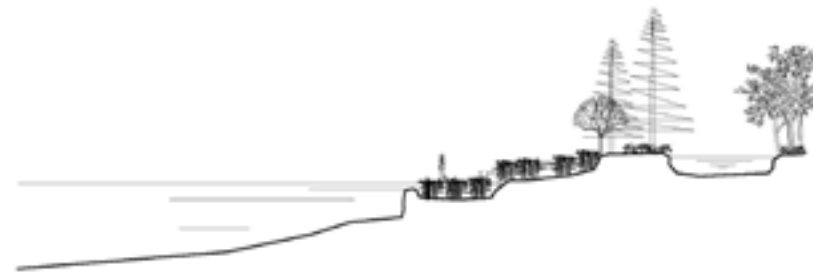
Section A-A'



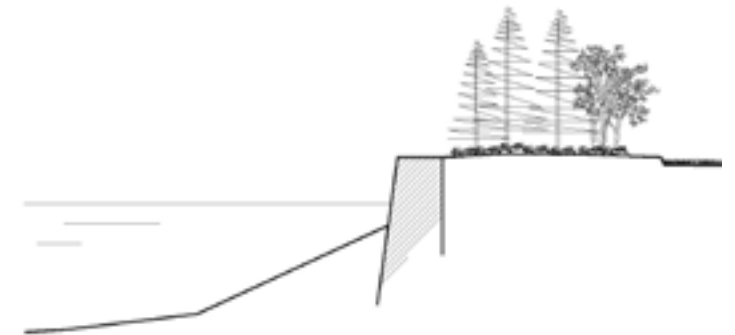
Section D-D'



Section B-B'



Section E-E'



Section C-C'



Section F-F'



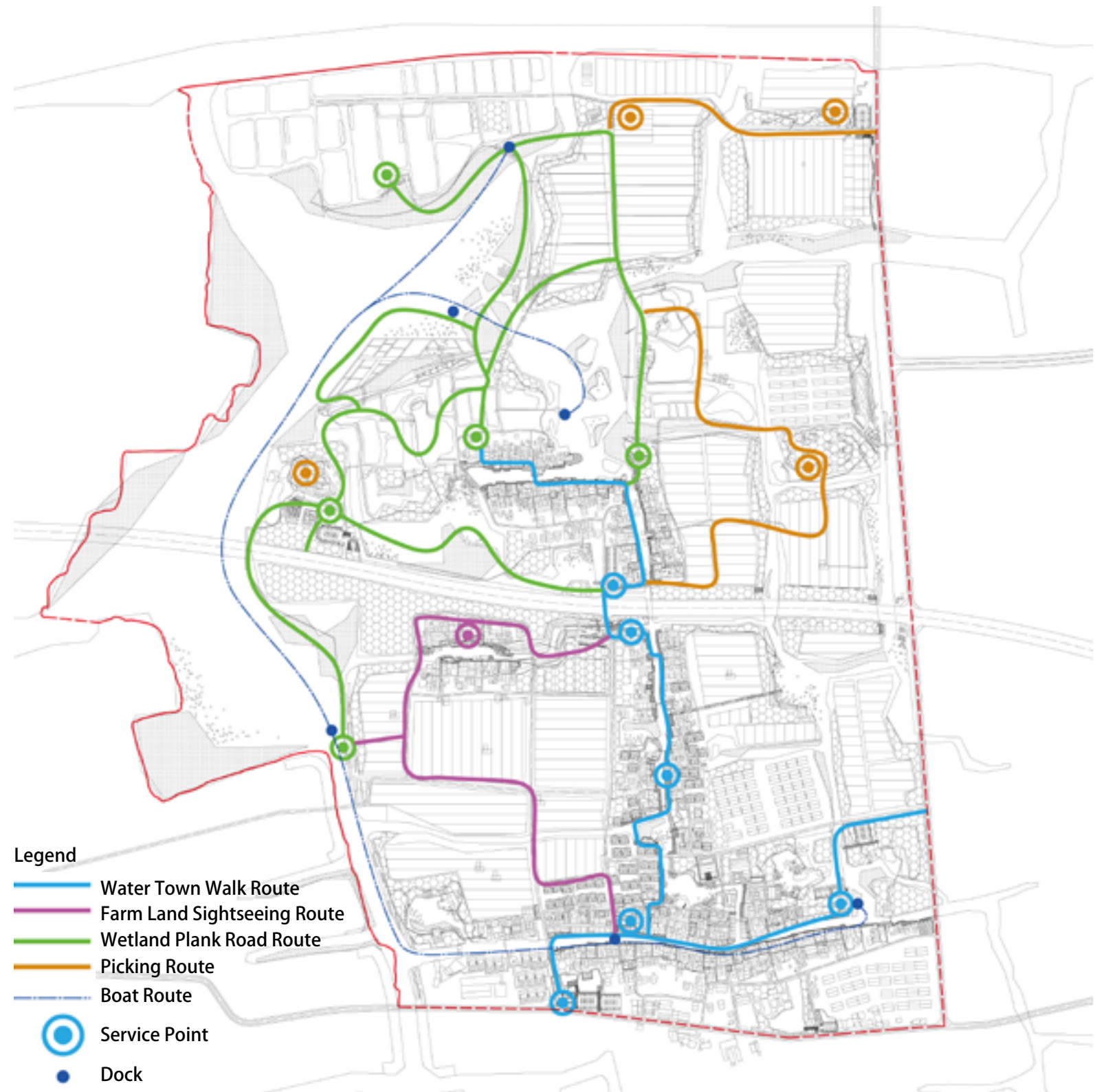
## Travel Tote Planning

This planning based on the wetland ecological conservation and protection of ancient villages, add tourism function for the town planning, according to the natural scenic spot planning rules, combined with the overall layout and landscape resource to plan the landscape structure, node, sightseeing experience line, functional area and so on.

1. The planning and design of landscape nodes can be divided into traffic type and landscape node type according to the function. There are 10 traffic nodes, which are located in the main road nodes and the entry points. There are many landscape nodes, and all kinds of visual focal points are formed according to the organization of the tour line and the division of scenic spots.

2. The experience tour lines can divided into 5 lines , in accordance with the line type, respectively, the water town walking tour line, field tour line, the path on wetland tour line, picking farm tour line and water tour line experience.

4. The tourism functional area planing is made according to various types of activities, there are ecological viewing area, sports area, farming experience area, science education area, leisure life area and nostalgia area. And some of these areas are complex, and there are several types of overlap.







### 4.2.2 Ganglang Urban Design



- The principle of preserving the overall spatial pattern of ancient villages
- The principle of restoration of the historical environment of immovable cultural relics
- The principle of Integrating Historical Context and Time Identity Space
- Public activities are compatible with community life
- The principle of Progressive protection and orderly also elasticity utilization



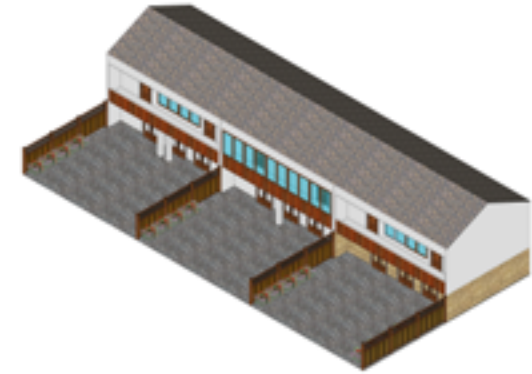
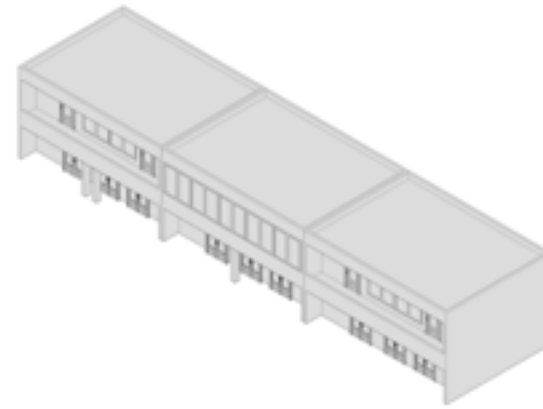
House inGanglang  
Took by Author

\* The images from now on, if there is no remarked, are made by author

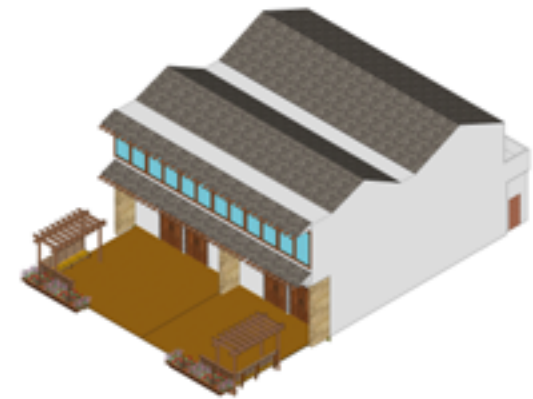
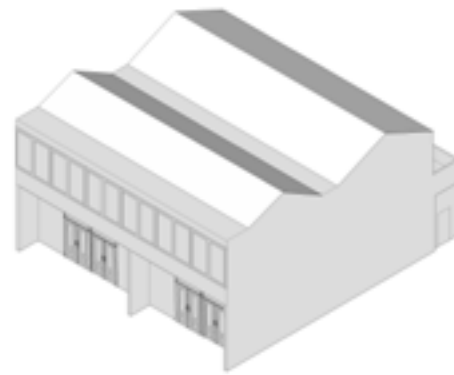
Enhance Rural House



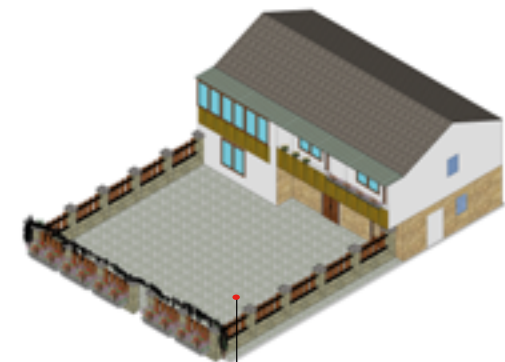
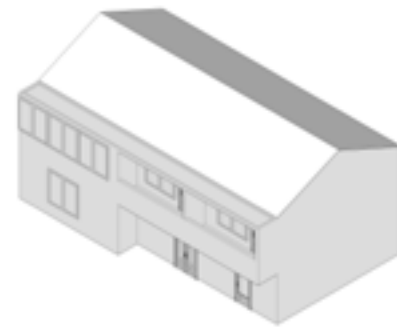
A type



B type



C type





Enhance Rural House



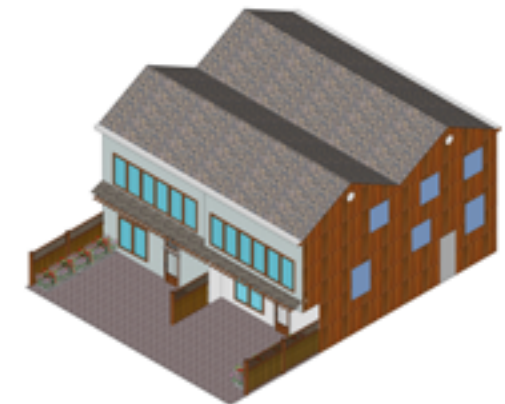
D type



E type



F type



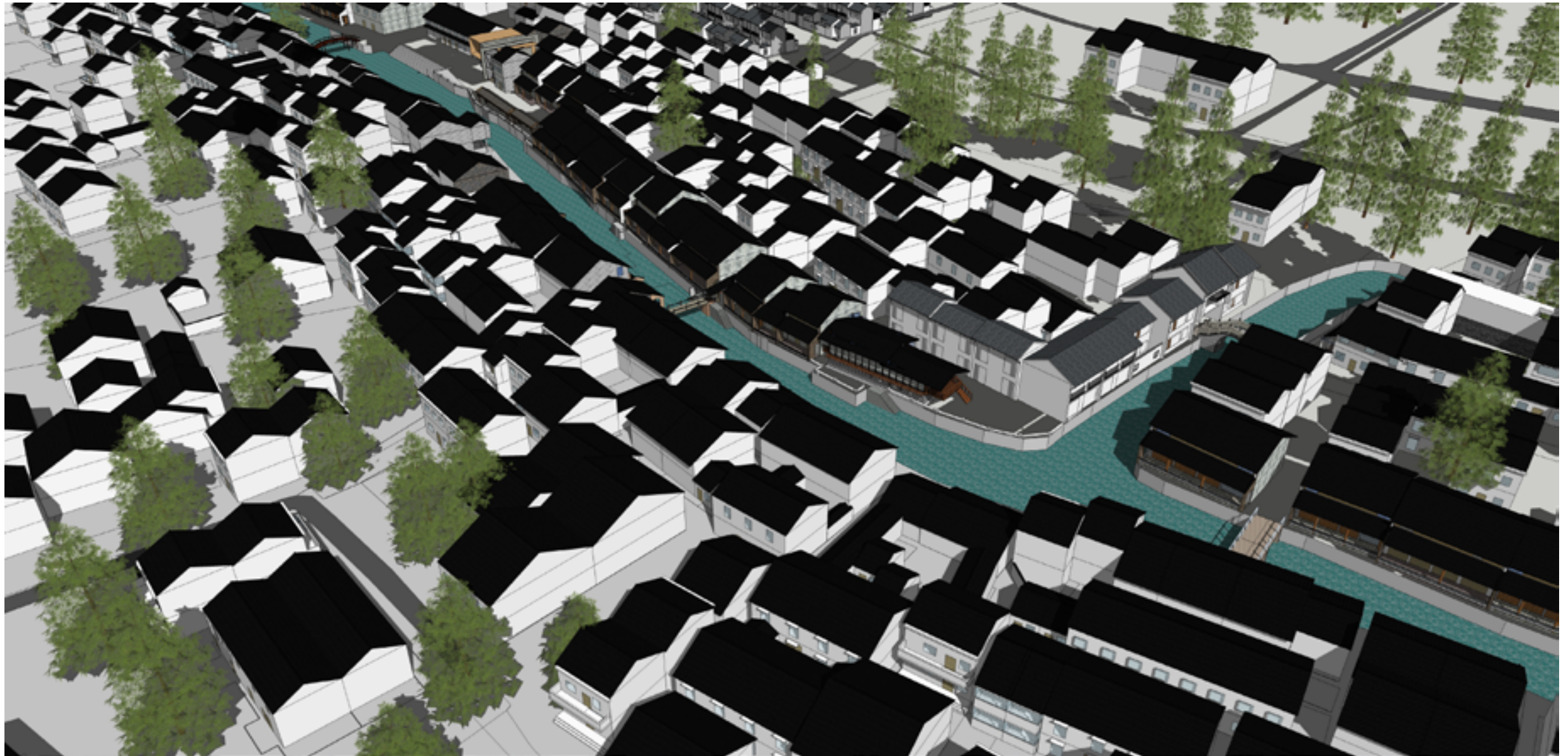
## Area Partition

In order to meticulously carry out the urban design of Ganglang, the site is divided into four important areas. There are main nodes and entries nodes in each area, and there are also landscape designs for each area.





4.2.2.1 Area 1







Planning Typology







## Building Perservation



### Legend

 Historical Building

 5 meters control range line. Within the range, no new buildings can be built and the old buildings need repair and maintenance. In any case, avoid damage to the protection buildings.

 10 meters control range line, within the range, new buildings style should coordinate with protection buildings and the building height shall not be higher than the protection buildings.



## Commercial Activities



### Legend

#### Commercial

- 1 Restaurant
- 2 Tailor's shop
- 3 Handcraft shop
- 4 Teahouse
- 5 Fish Market
- 6 Grocery
- 7 Snack bar
- 8 Restaurant
- 9 Restaurant

#### Community Services

- 10 Cloth Store
- 11 Community Center
- 12 Village Committee
- 13 Supermarket
- 14 Mail
- 15 Barber Shop
- 16 Book Store
- 17 Bank
- 18 Pharmacy

#### Tourist Services

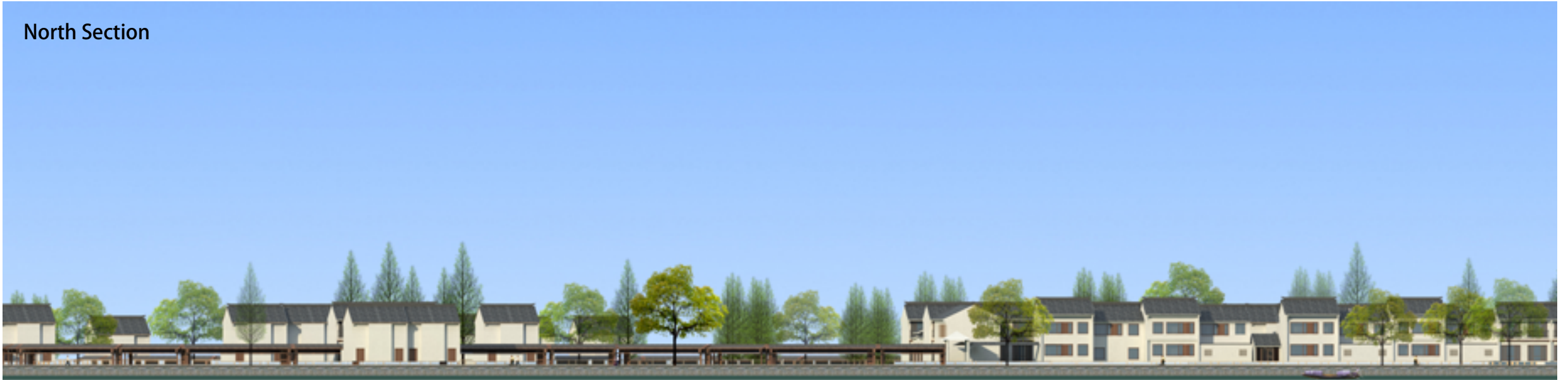
- 19 Souvenir Store
- 20 Cafe
- 21 Cloth Store
- 22 Restaurant
- 23 Mail
- 24 Gallery
- 25 Book Store
- 26 Tourist Center
- 27 B&B

## Landscape Structure

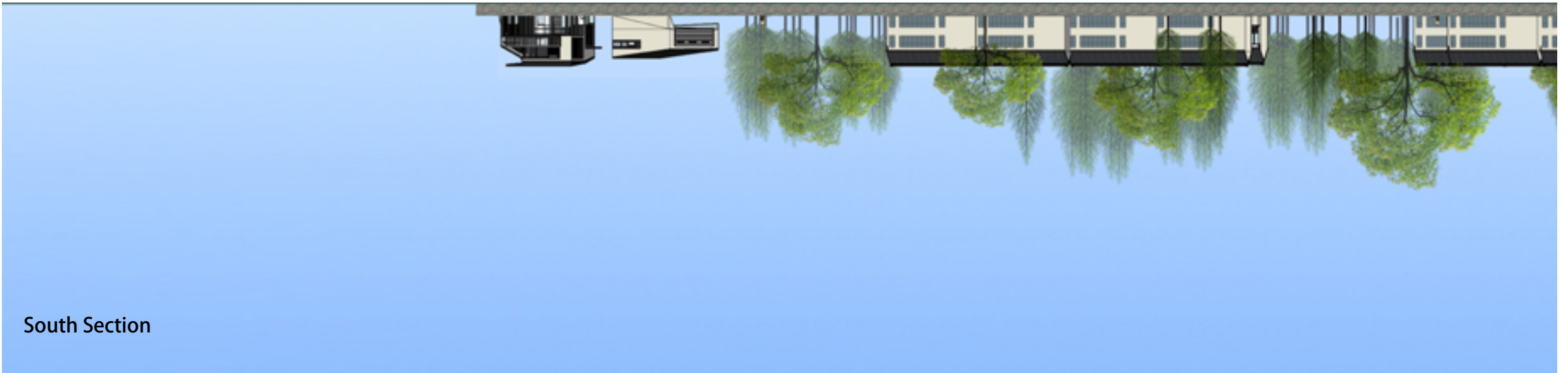


## Section Along the River (1)

North Section



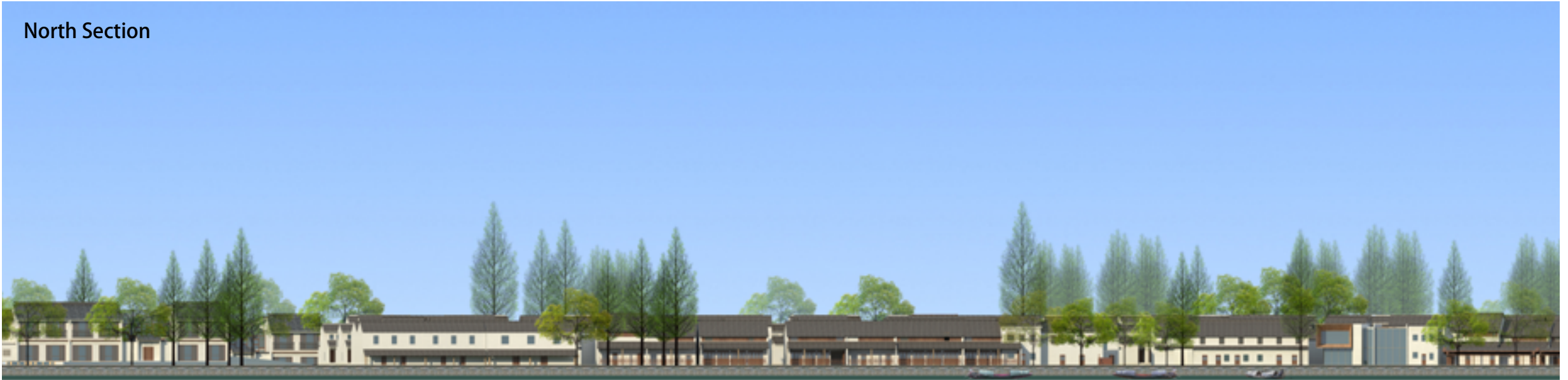
South Section





Section Along the River (2)

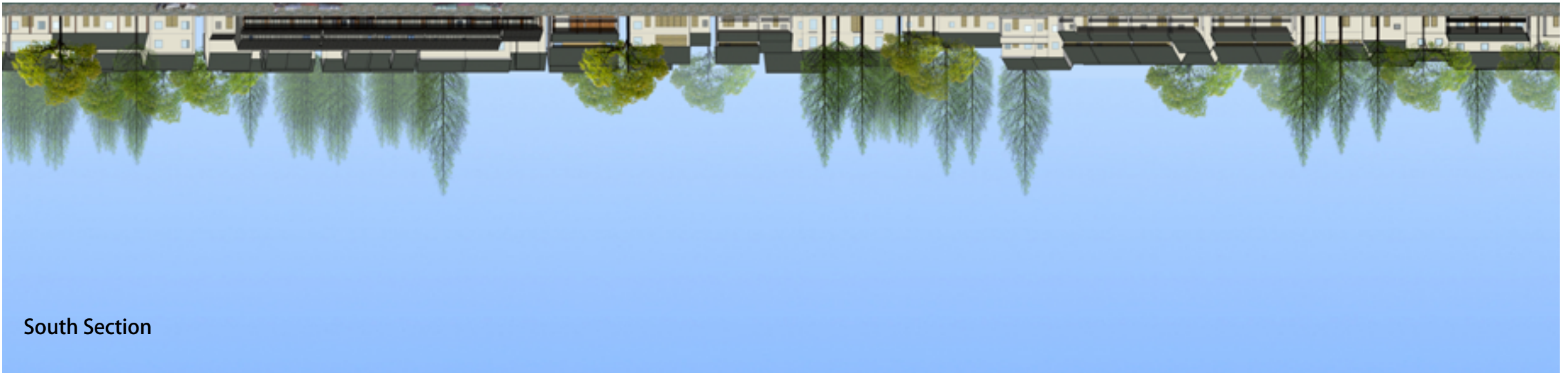
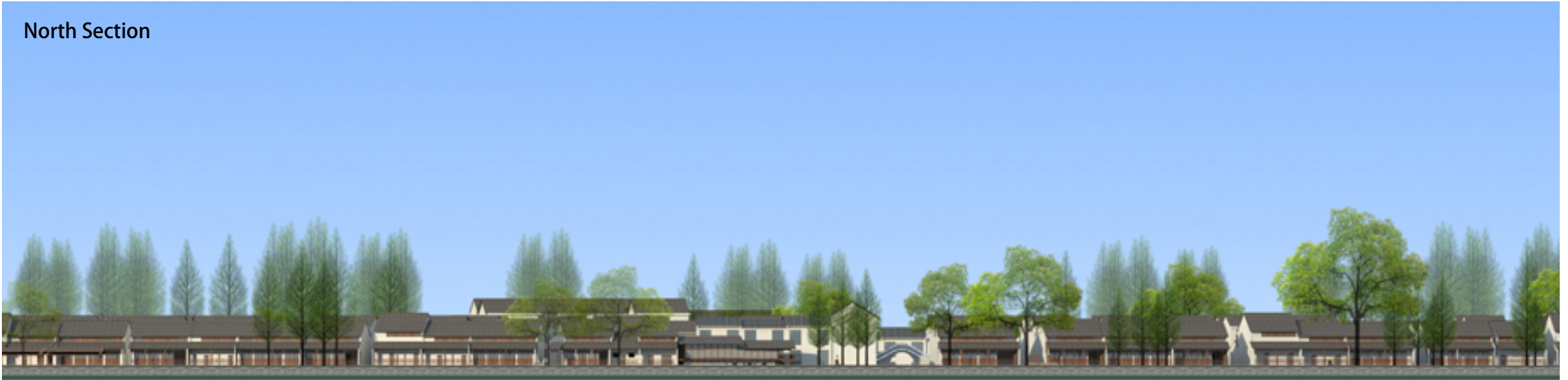
North Section



South Section

Section Along the River (3)

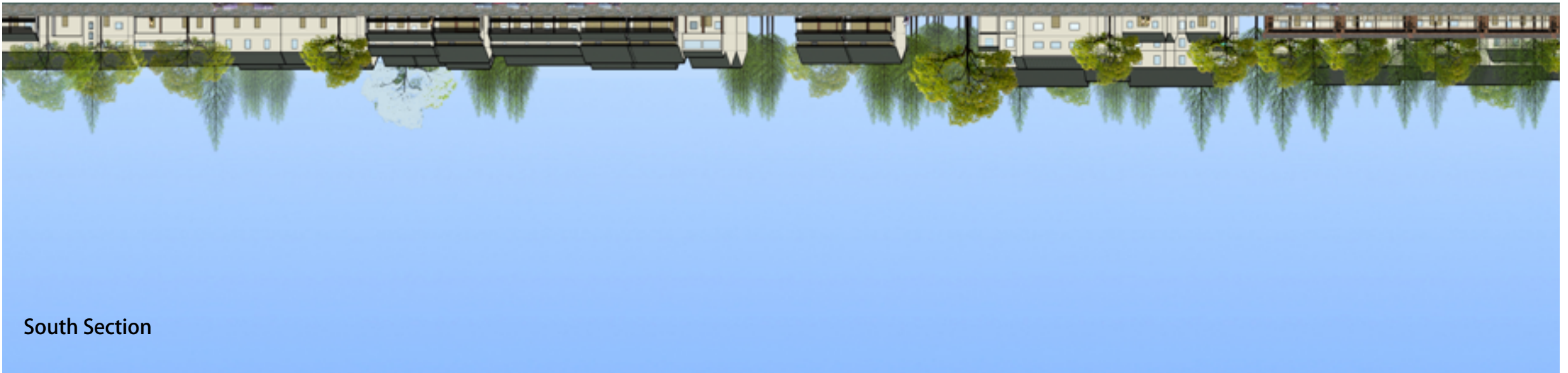
North Section



South Section

Section Along the River (4)

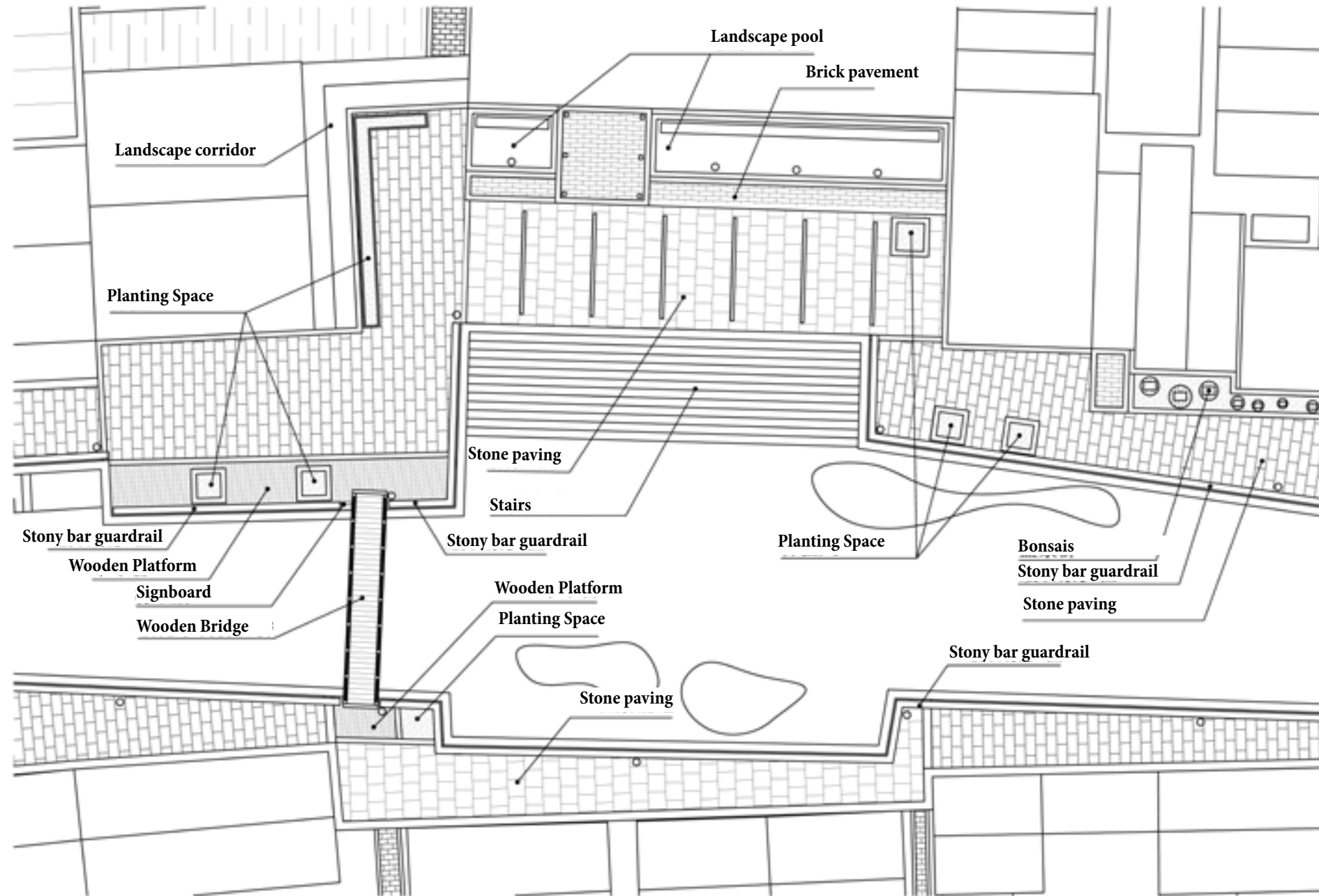
North Section



South Section



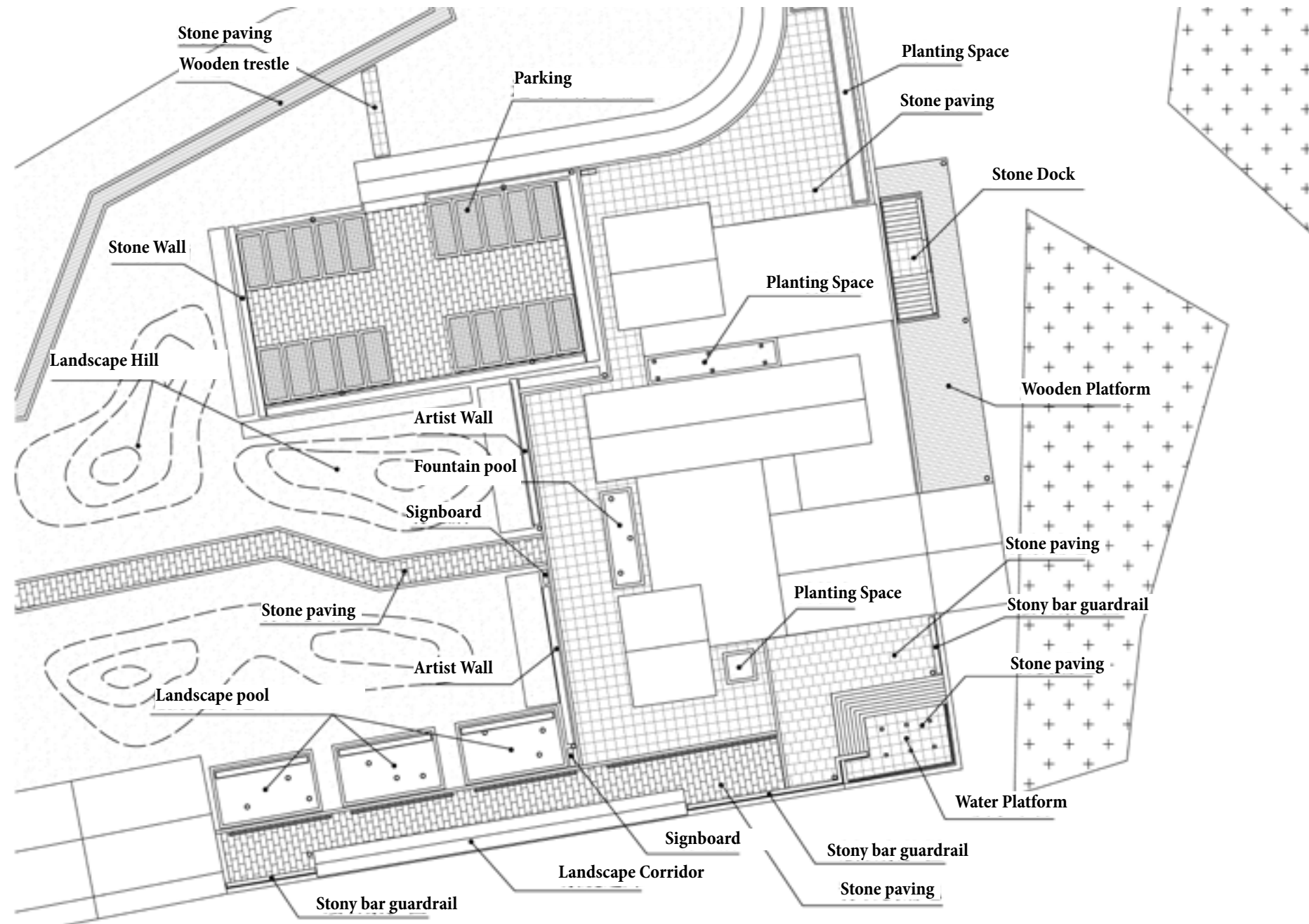
# Floor Plan of Landscape Node 1



Design sketch of Landscape Node 1



## Floor Plan of Landscape Node 2



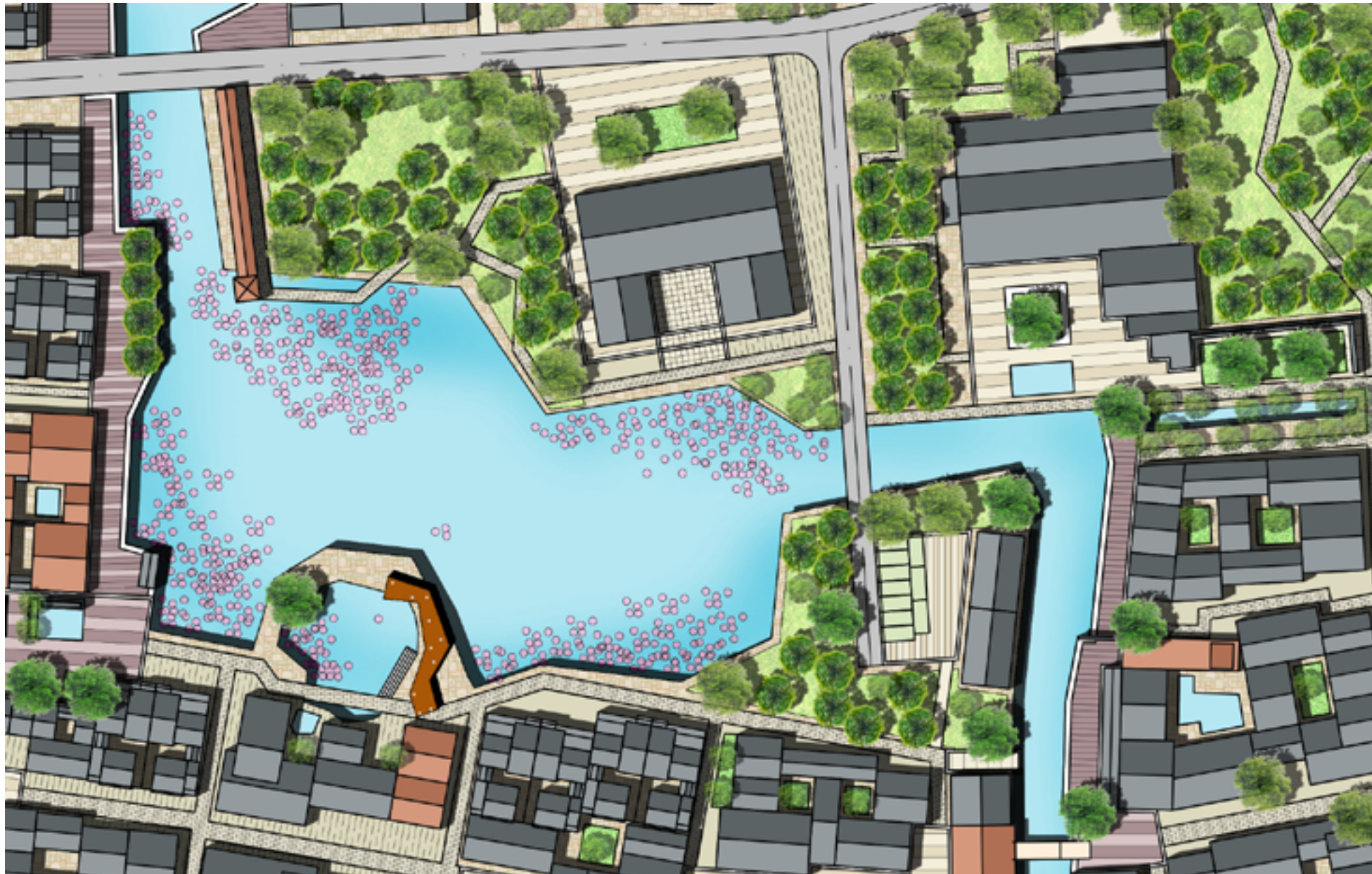


Design sketch of Landscape Node 2





Floor Plan of Landscape Node 3





Design sketch of Landscape Node 3





Floor Plan of Landscape Node 4



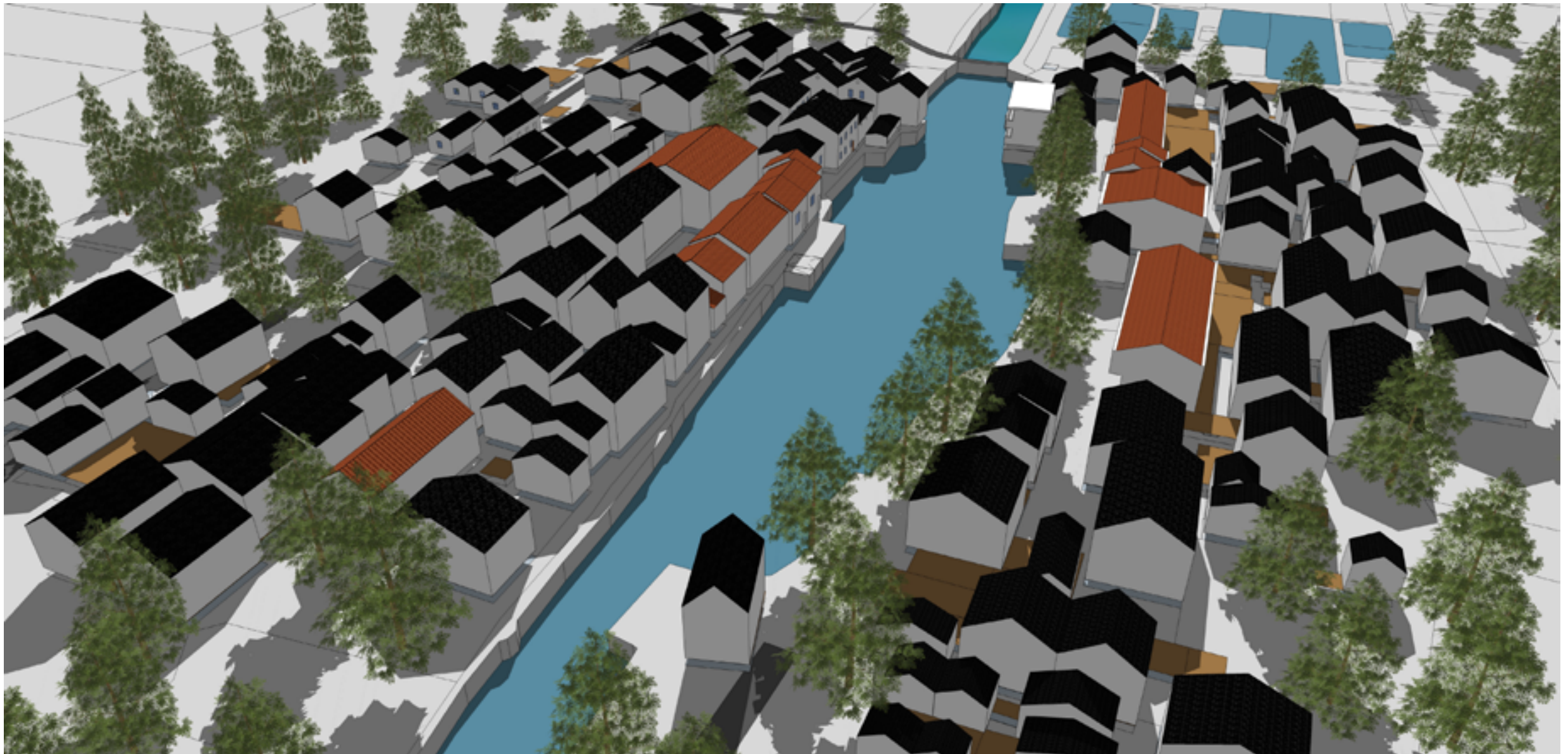


Design sketch of Landscape Node 4





4.2.2.2 Area 2





Floor Plan of Area 2





Planning Typology



## Type of Operation Plan

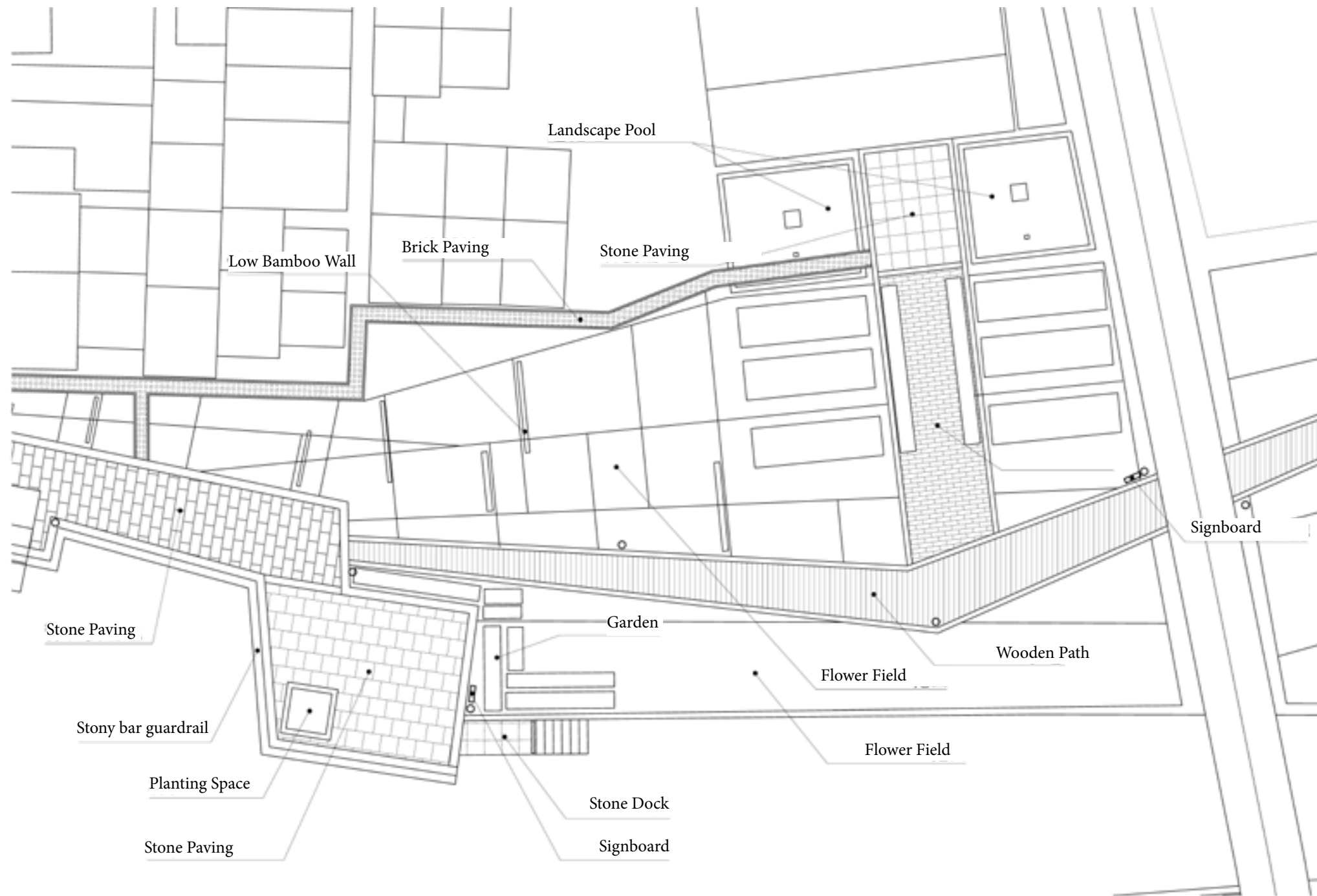




## Landscape Structure



# Floor Plan of Landscape Node 1

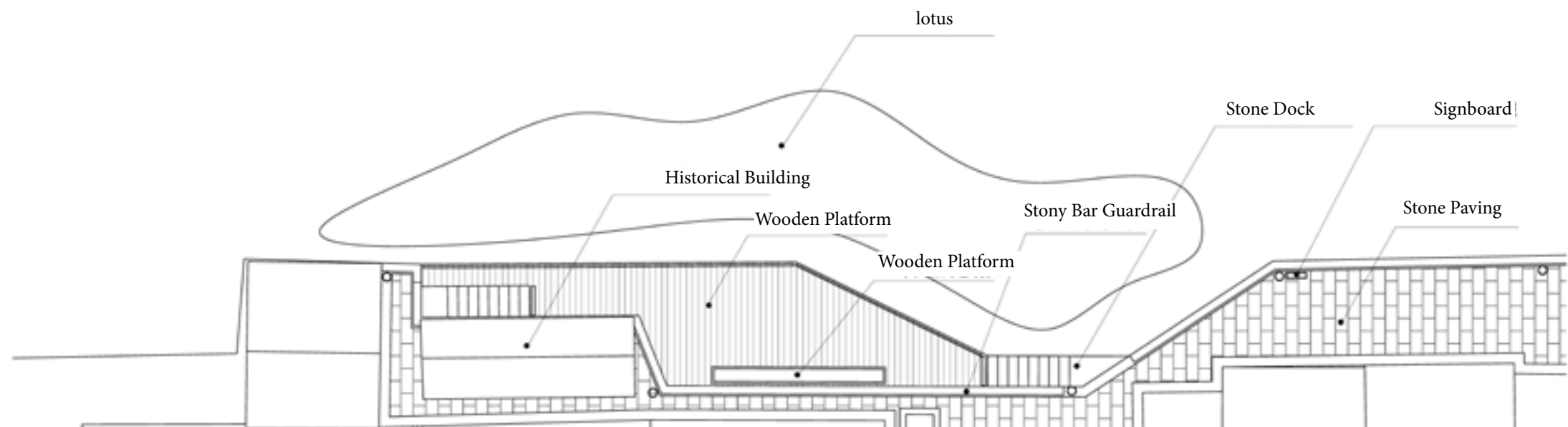
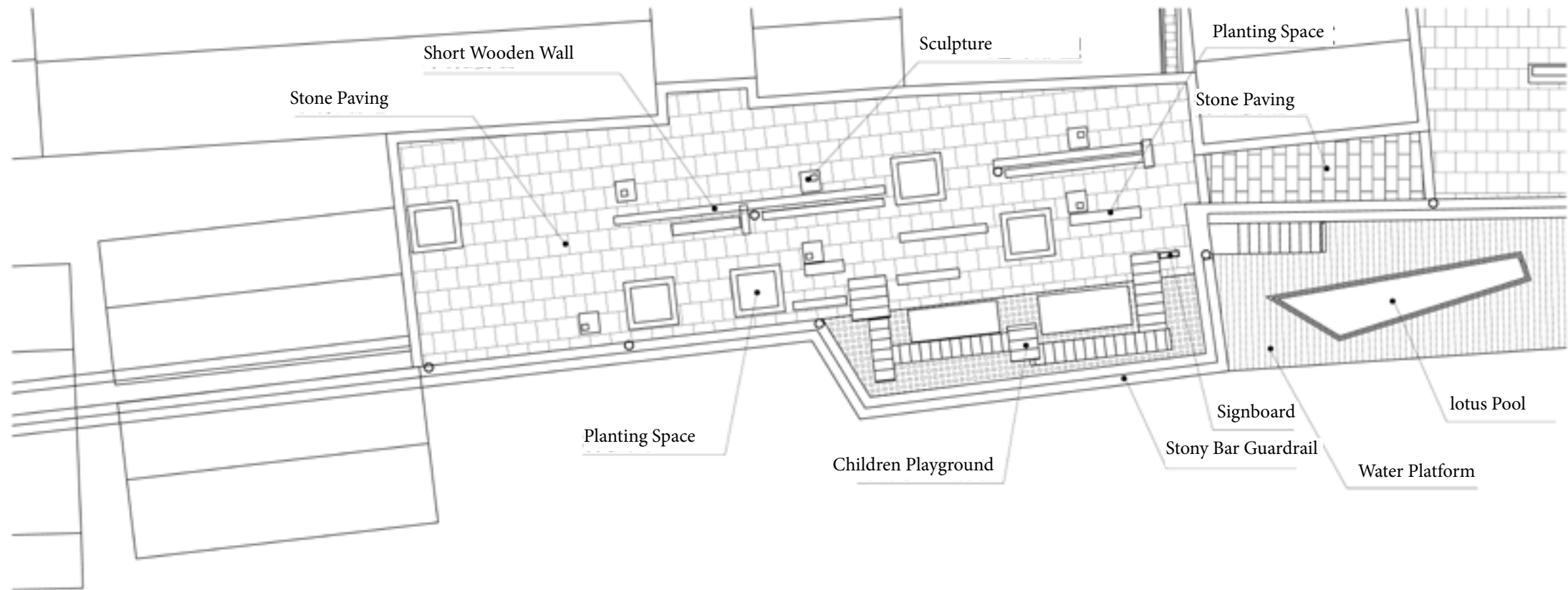




Design Sketch of Landscape Node 1



## Floor Plan of Landscape Node 2





Design Sketch of Landscape Node 2



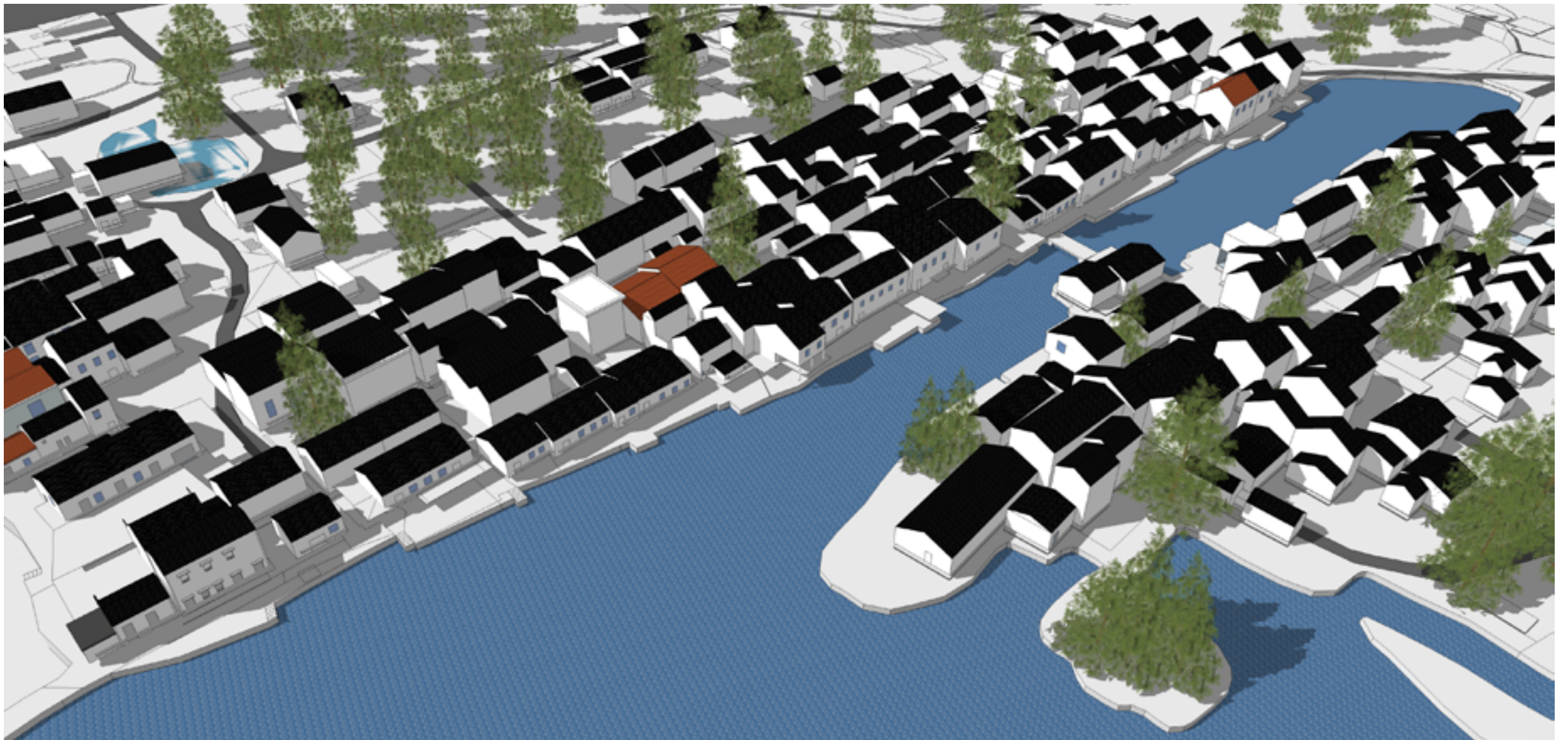


Design Sketch of Landscape Node 2





### 4.2.2.3 Area 3





### Floor Plan of Area 3





Planning Typology



## Historical Building

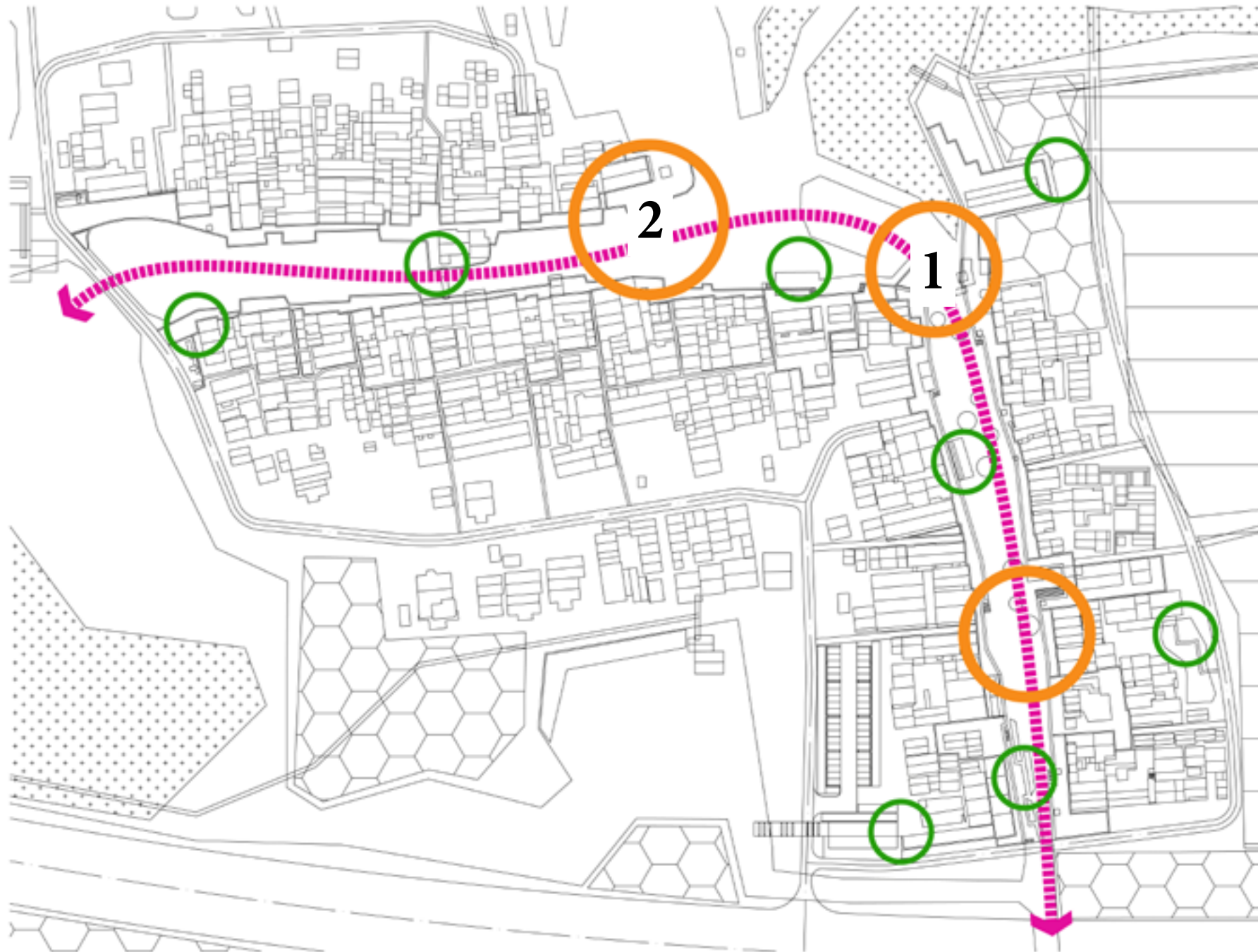




## Type of Operation Plan

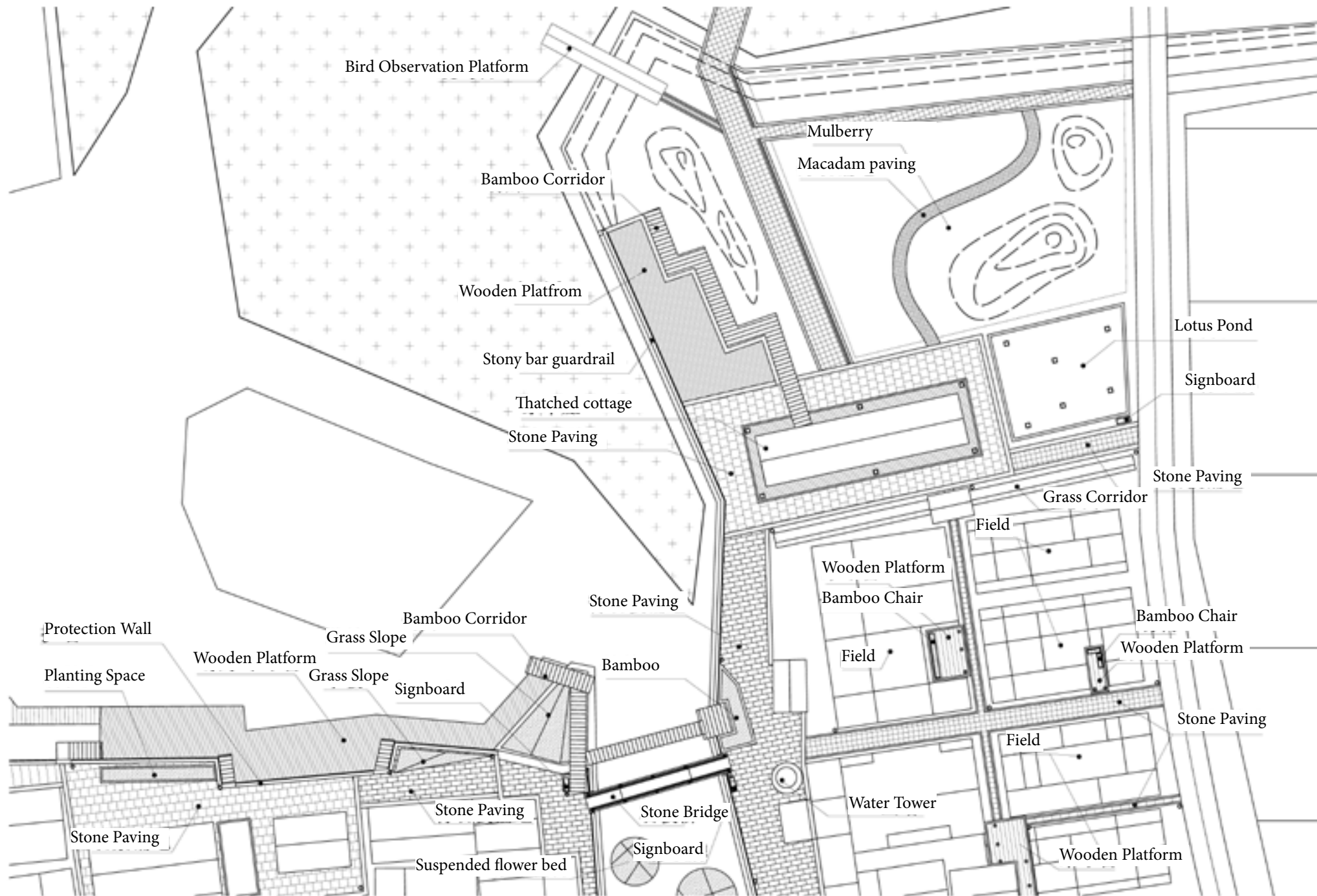


## Landscape Sturcture





# Floor Plan of Landscape Node 1

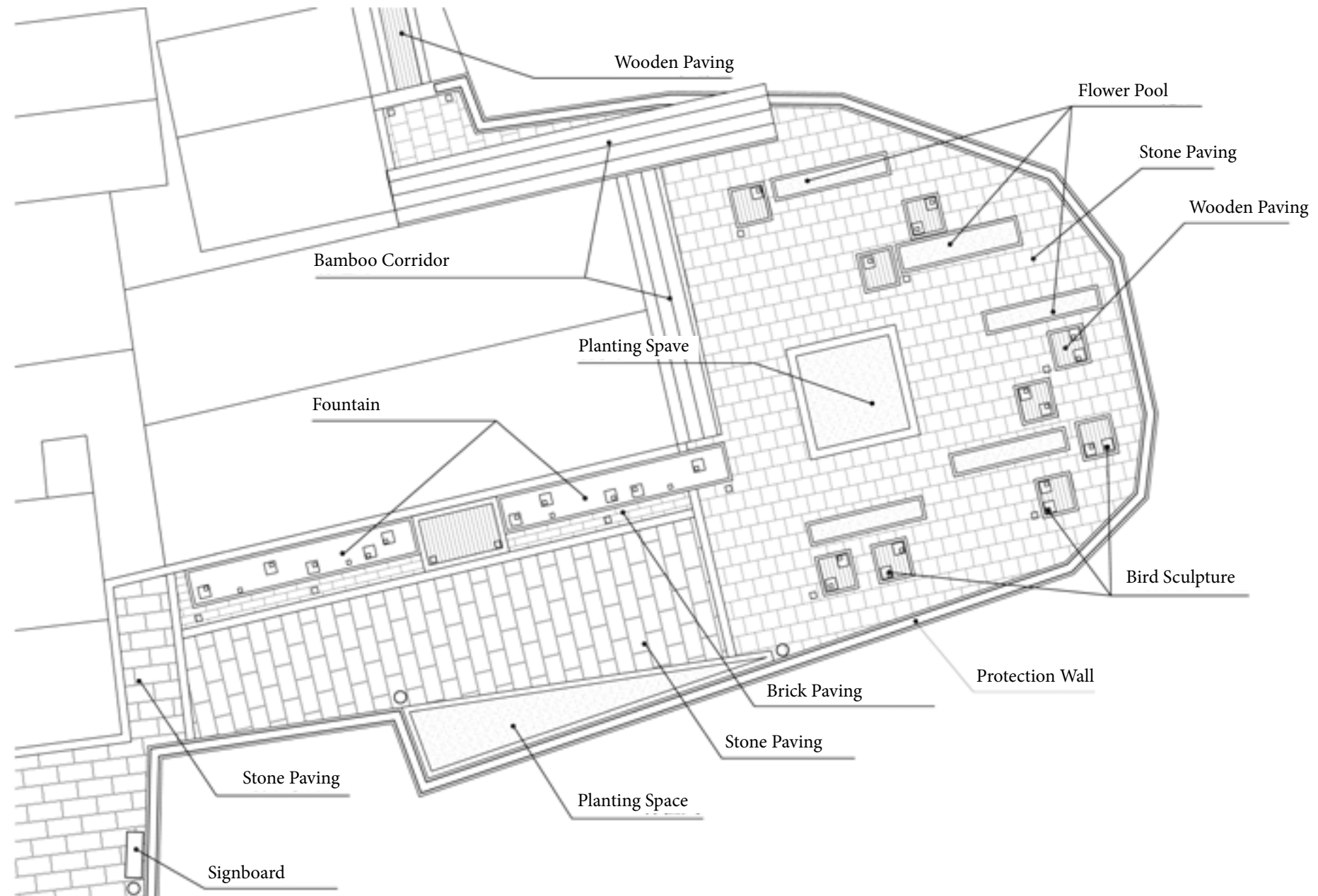


Design Sketch of Landscape Node 1





## Floor Plan of Landscape Node 2



Design Sketch of Landscape Node 2





4.2.2.4 Area 4





Floor Plan of Area 4





Planning Typology

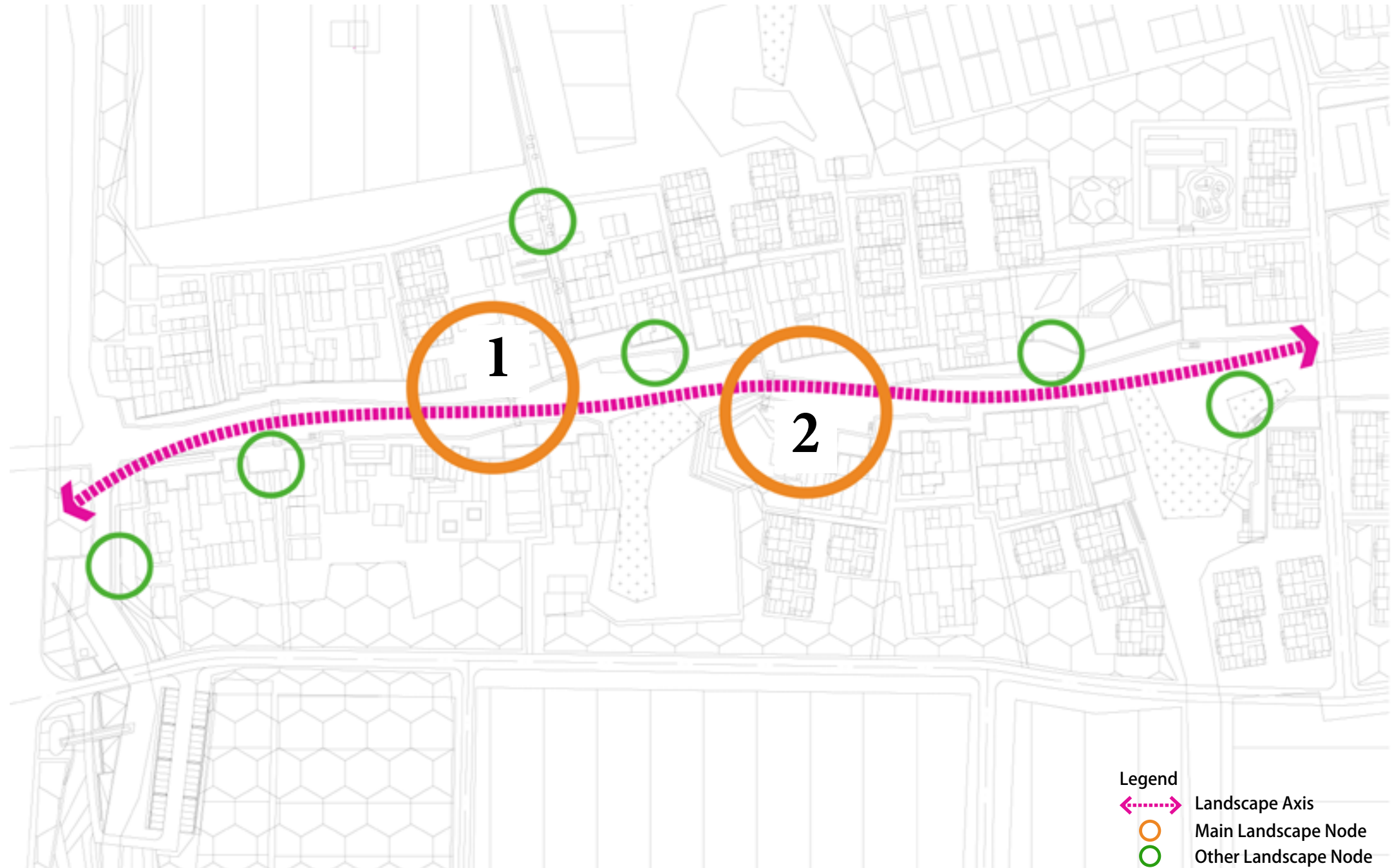


## Planning Typology

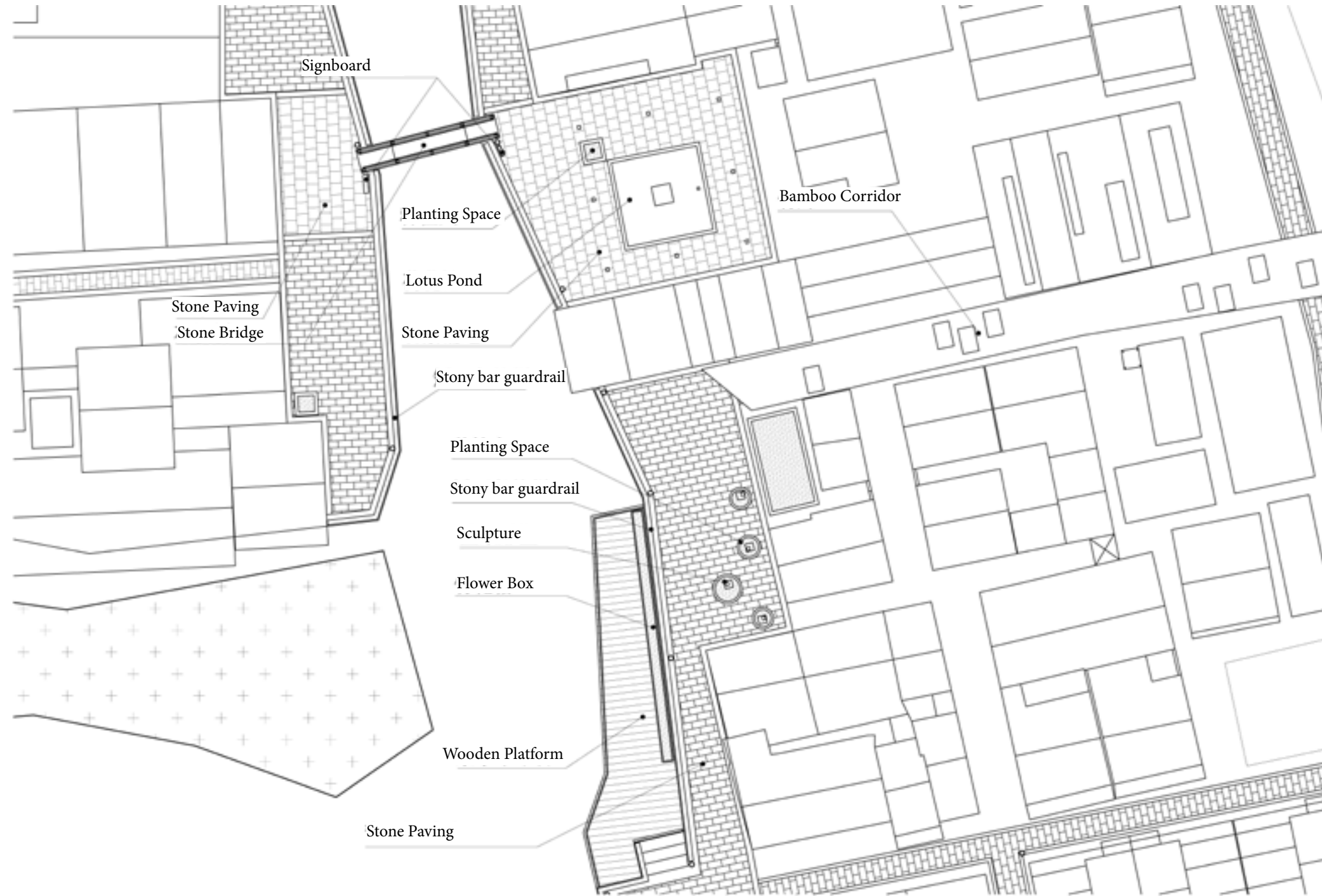




## Landscape Structure



# Floor Plan of Landscape Node 1

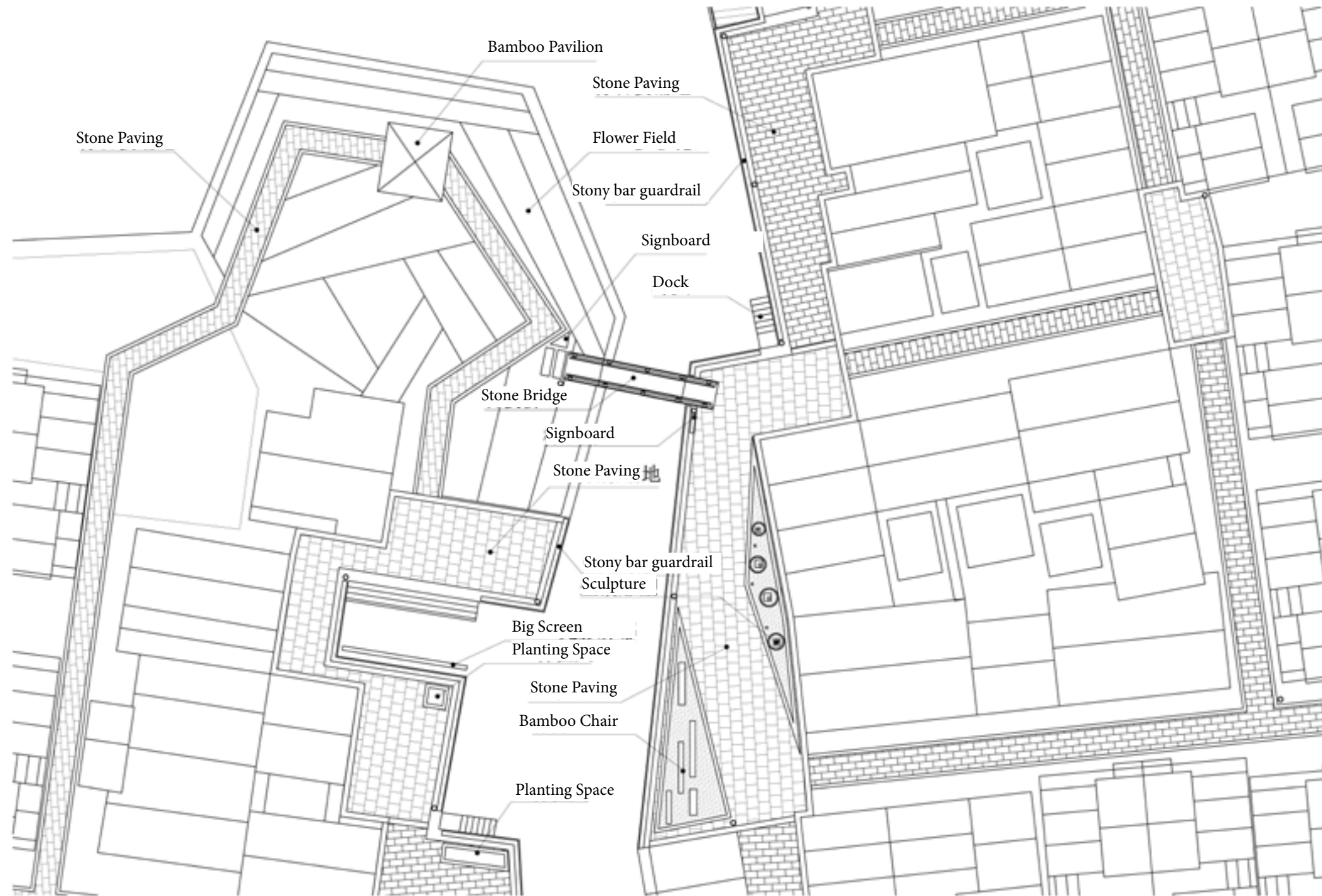




Design Sketch of Landscape Node 1



## Floor Plan of Landscape Node 2





Design Sketch of Landscape Node 2



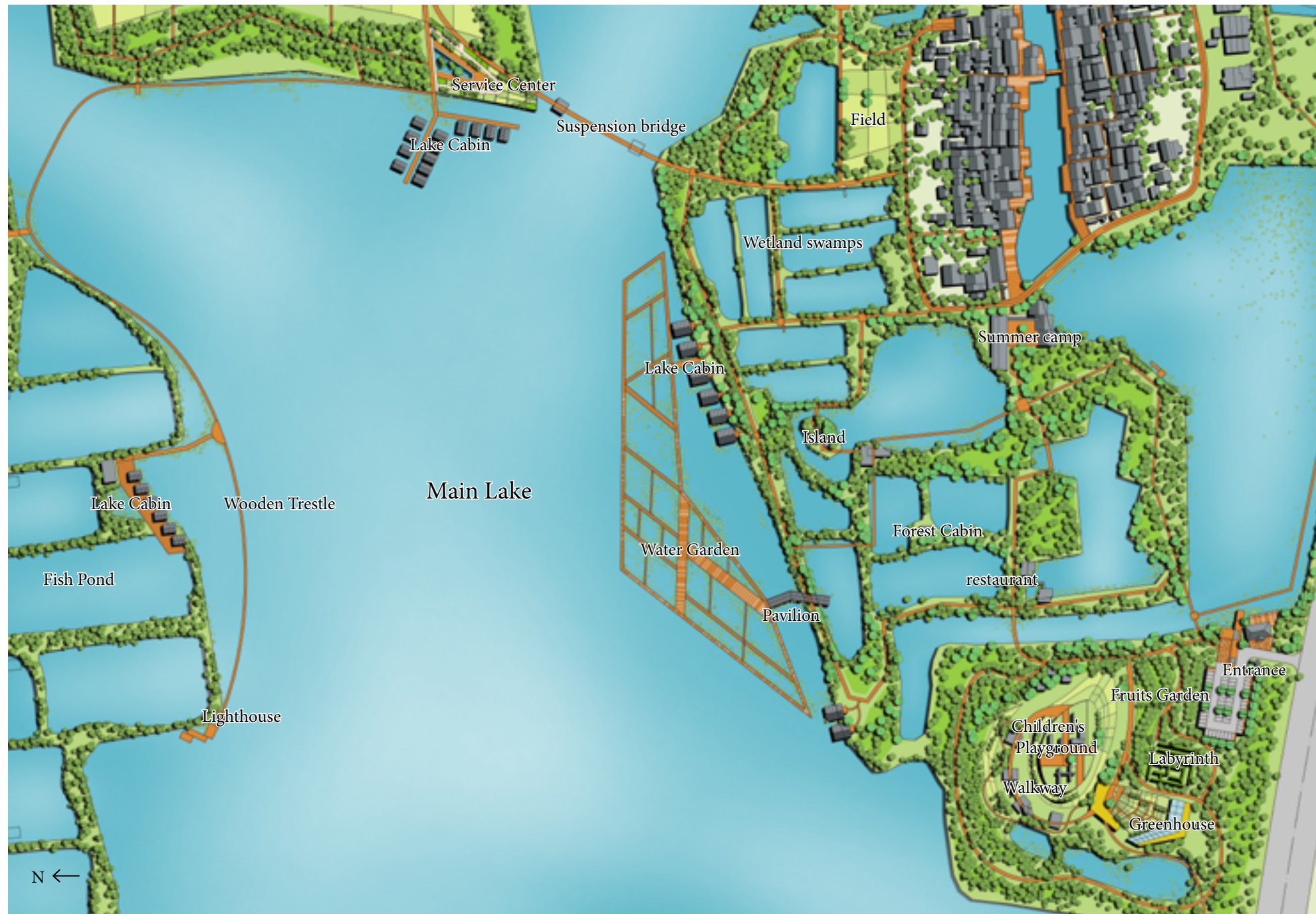


### 4.2.3 Wetland Landscape Design





## Floor Plan of Main Lake Area





Design Sketch of Main Lake





# Floor Plan of Forest Area





Design Sketch of Forest Area





## **4.2.4 Municipal Facilities Planning**

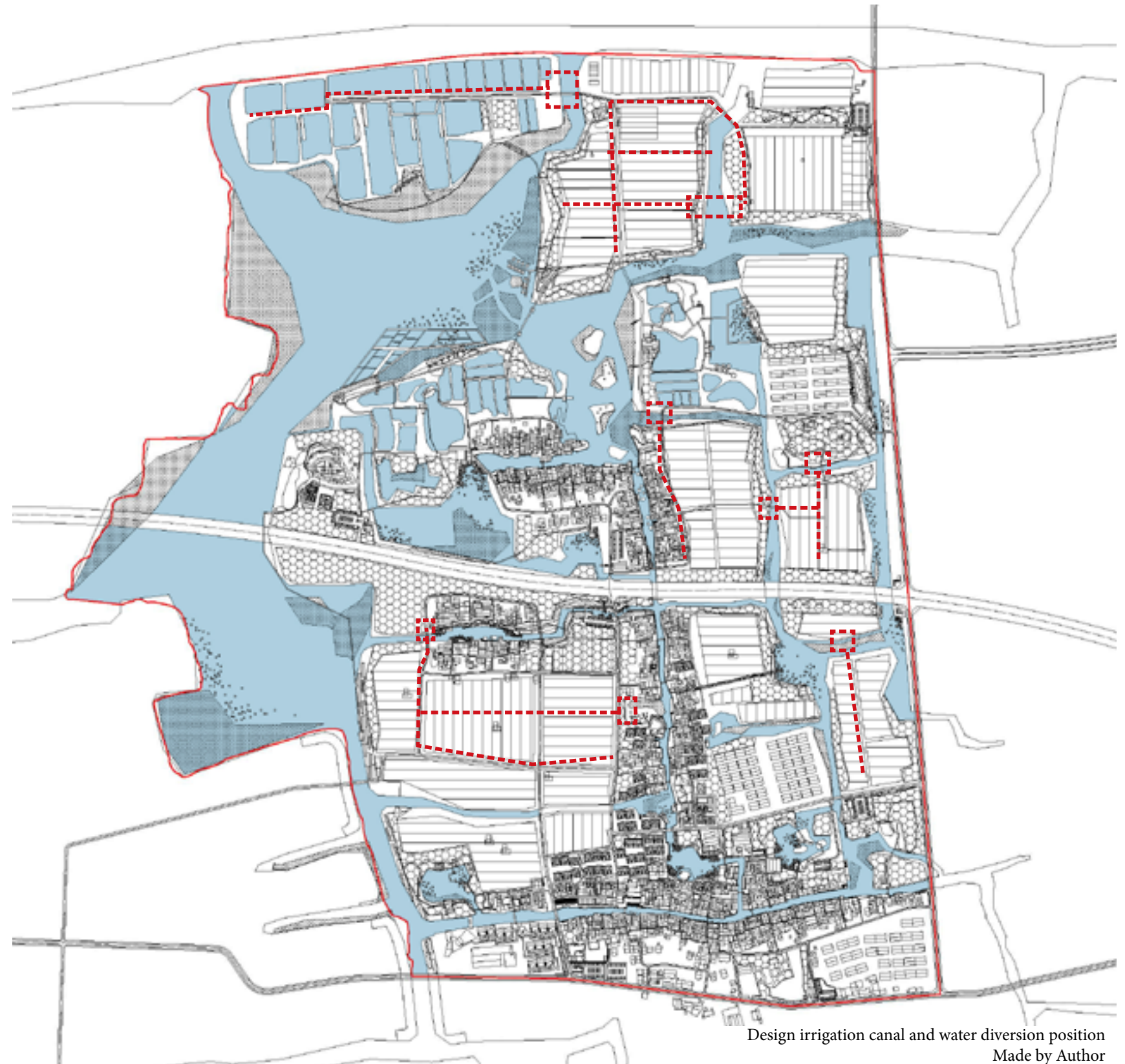
## Sewage Disposal

Designed to move factories and other pollution sources out of the planning area, the main sewage produced by wetland town is farmland drainage and domestic sewage generated by pesticides, fertilizers and other residues.

### "Farmland retreating" sewage treatment system

Because the residues of pesticides and chemical fertilizers can enter the wetland through farmland, it will cause eutrophication and other problems in wetland water quality. Therefore, the source need to be control.

According to the status quo of agricultural irrigation canal, the current situation of agricultural irrigation canal can be retained, the irrigation canal can be used, dredging and dredging with political and dredging, dredging the drainage system, increasing the water intake of irrigation canal, and striving for sewage diversion. At the same time, combined with the flow direction analysis, the water level of the irrigation canal is set up in the area with large water flow.



Design irrigation canal and water diversion position  
Made by Author



### Domestic sewage treatment system

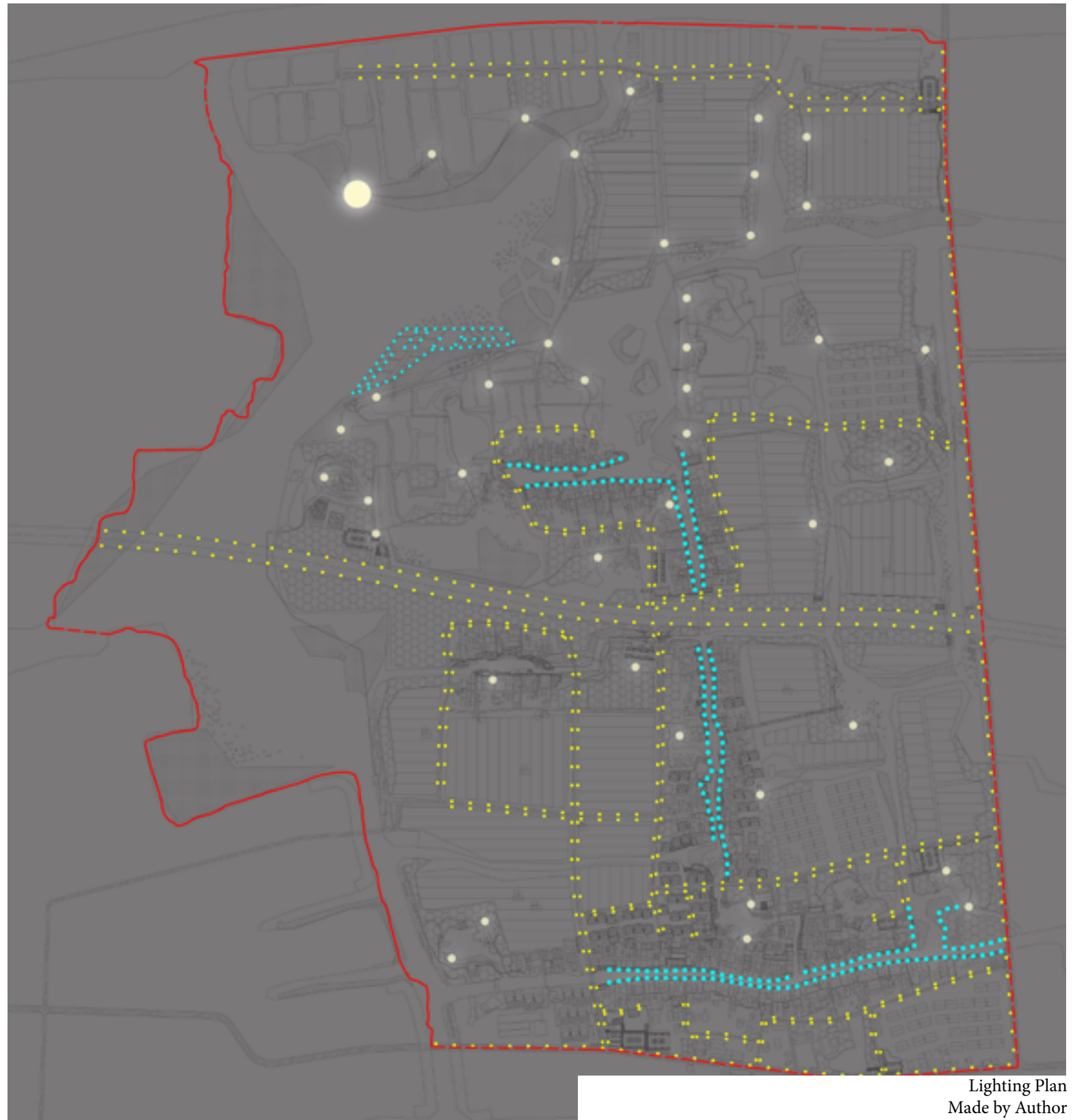
The current sewage system design is widely distributed, and is distributed in Xingang village. There are 8 terminal facilities, which deal with domestic sewage everyday and are relatively complete. Therefore, the treatment of wetland domestic sewage mainly leads to further purification on this basis.



## Lighting Plan

Lighting design should reduce the damage to the habitat of waterfowl, bird and fish, in order to respect nature and reduce human intervention.

The design is mainly based on ecological experience. The lighting mode is mainly based on low brightness and safety lighting, and appropriate night floodlighting is considered around the town.



Lighting Plan  
Made by Author



## Fire Control Plan

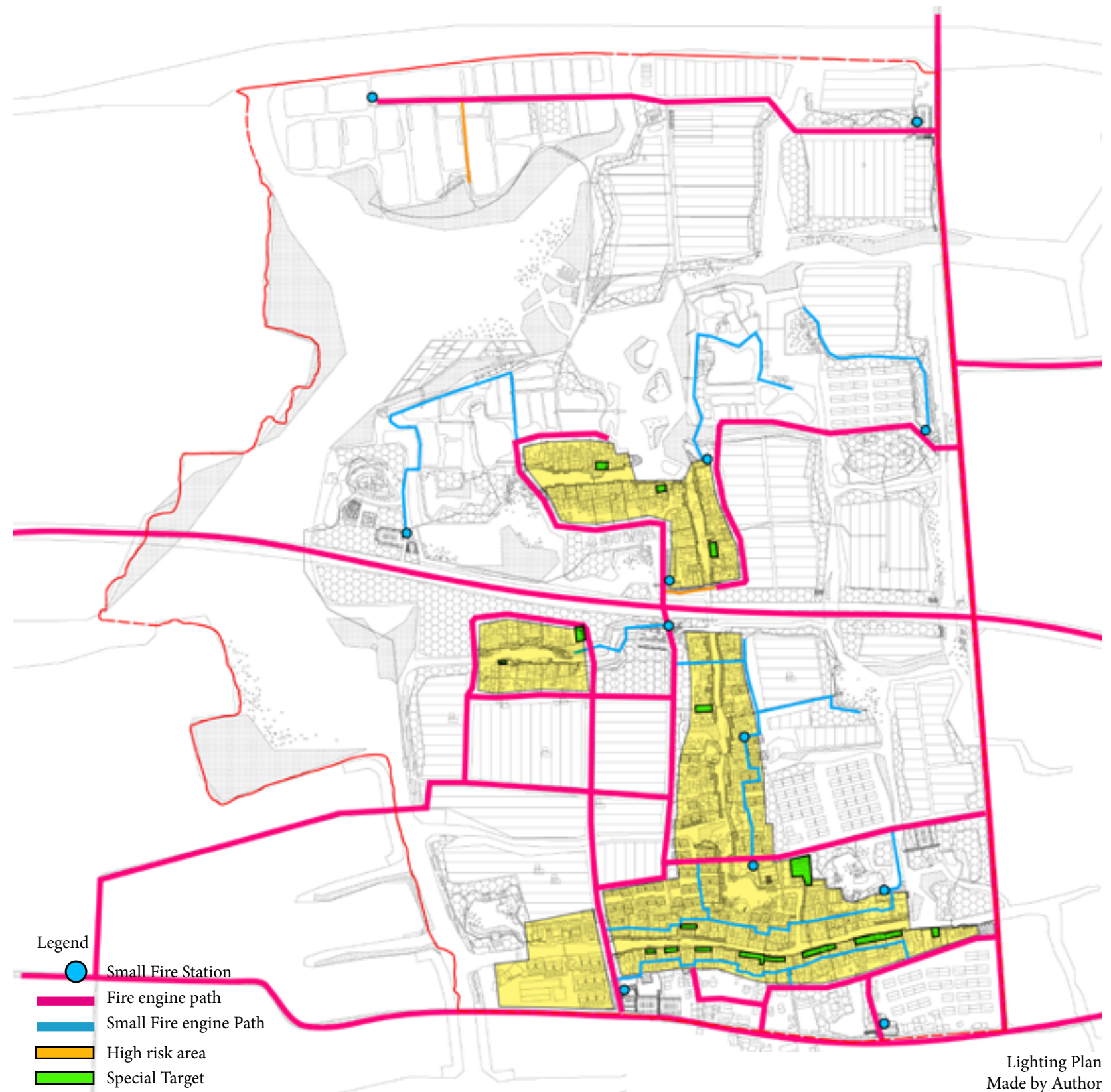
Key fire prevention areas: including old streets and village building intensive areas, fire zones are easily generated, and fire hydrants are not more than 80 meters in the area.

The special fire prevention object: the historic building in the village has high cultural value and scarcity, and the necessary fire extinguishers should be equipped around it.

Fire vehicle passageway: pass large fire vehicle, arrange fire line around the road around the village.

The fire vehicle traffic path: a small paperback paperback fire vehicles, relying on the street layout of fire line inside the village proper width.

Small Fire Station: Fire detection in the site place fire trucks and motorized fire Lite related fire protection facilities.



## **5. Summarize**



Since 80s in the last century, with the development of economy and the second industry, the third industry demand for labor, rural population continued to transfer to the city, and then, started the traditional urbanization of China, which is a essential process of transfer China's traditional agricultural society to the modern society. But in the process of the rapid development of traditional urbanization, the development of the rural areas and small towns has caused some harm. The unbalanced allocation of resources between urban and rural areas has led to the lag of rural economic development, the lack of infrastructure and the outflow of labor force directly lead to a series of social and economic problems, such as hollowing village, in rural areas.

In order to change the city development imbalance, China is experiencing a new urbanization process and it has become one of the important strategic task in China's modernization construction. An important content in the process is the construction of small towns. Even if China's urbanization level reaches more than 70% in the future, there are still four and five hundred million people living in rural areas. Rural areas can not become the barren countryside, the left behind place, the memory of the home. The urbanization should needs development, the agricultural modernization and the new rural construction should also be developed.

China has a long history of farming civilization, which makes people yearn for the pastoral life. When the urbanization rate exceeds a certain level, the traditional rural culture, the agricultural landscape and the pastoral scenery will become rare resources. This also sprouted the rural tourism, the upsurge of pastoral tourism, and became the new fulcrum of the rural economic recovery. The planning and design of the ancient town of the Ganglang wetland historical town is also an exploratory experiment based on this.

In Chinese village, small town construction should not only consider the space environment, but also need more comprehensive in-depth consideration of the development of small towns in rural areas, their own "hematopoietic function", to enhance the development ability from the bottom up, from the inside out, in order to achieve sustainable development of rural economy and social environment.

After investigating the development of small towns in Europe, the US and the developed countries in Asia, we can find that most of the countries attach importance to the overall development of industrial economy, social culture and space environment. These three are mutually supportive and indivisible. The

development of industrial economy is like the "hematopoietic function" of the village itself. It is the economic foundation for the construction of social culture and space environment, and it can provide sustainable development power for rural construction. The industry growth and cultivation which suitable for the local conditions, local resources and tradition, can provide the full employment of villagers in rural, young labor with development in his hometown for entrepreneurial desire and it can attract even the neighboring villages and outside labor to employment; the development of social culture is the soul development, focusing on the development of the villagers themselves, respect the villagers, maintain the rights of the villagers, keep local cultural heritage, make the rural civilization constantly. Therefore, the social and cultural development is the ultimate goal and the significance of the economic development of rural industry; space environment development is the material carrier of economic, social and cultural development of rural industry; space environment, can promote the rural industrial economy level, and create a good material basis for the rural social and cultural activities, to facilitate the life of the villagers.

Under the background of new urbanization in China, combined with the author's Thoughts on the development of rural areas and small towns, the author decided to use this way to expand this thesis. Based on the analysis of the common problems of Chinese villages and towns in the traditional urbanization, this paper introduces the policy of the characteristic towns. The characteristics of Chinese town is a new road of urbanization, to solve the problem of small town, one answer, although still trying to stage, but by the interpretation of the characteristics of small town policy have it on China small town bring about the changes that this feature of the town to try China in new urbanization road is of positive significance the. Planning and design for Hong Kong Gallery, is also based on the characteristics of small town policy, combined with the Jiangnan natural, economic and social characteristics, choose the development model of tourism and rural life combined, in order to solve the social problems of Hong Kong corridor, improve the quality of life of residents, economic development and ecological environment protection is not contrary to as the ultimate goal.

In the industrial planning and space design of the Ganglang, we focus on the following aspects: the environment, technology and human.

To fit environment, which is the basic principle of the planning and design of the Ganglang. The types of villages terrain and landforms are quite different. The

transformation of villages should be based on local natural terrain, geomorphic conditions and local conditions. We should pay attention to the land use of rural construction and save land. Taking advantage of the landscape features of natural terrain and geomorphology to lay a foundation for the environment with local features.

The applicable technology is the guide for the planning and design of Ganglang. Local traditional technical advantages, local materials and construction technology should be considered in the construction. The main purpose of adopting the appropriate technology is to avoid the use of advanced but very expensive technology, regardless of the local economic conditions. In Ganglang, the local economic condition is good, so some environmentally friendly materials can be selected for rural construction. But in places where traditional culture is needed, we should respect history and apply traditional technology to restore the original appearance.

Suitable for human is the core value of the planning and design of Ganglang. The fundamental goal of the development and transformation of the porch is for the development of "human". The construction of rural public infrastructure is an important condition for ensuring the quality of life. The rural public infrastructure includes two parts, living and municipal facilities planning. Among them, living facilities is mainly based on Villagers' daily business, cultural activities, village management, basic education, medical treatment and so on. Municipal facilities refers to the village roads, water supply, sewage treatment and collection and so on. These two aspects are included in the planning and design of the porch.

In a word, this paper is the thinking, discussion and exploratory practice on small village/town development model under the new urbanization background in the south of the Yangtze River area in China.



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