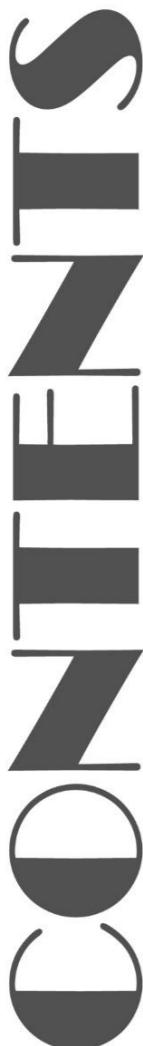


PORTFOLIO

Yunsen Waterfront Park

YANG Weiyi





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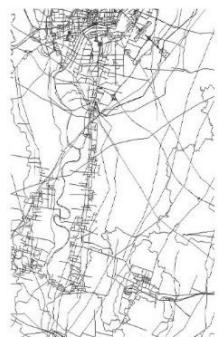
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part three

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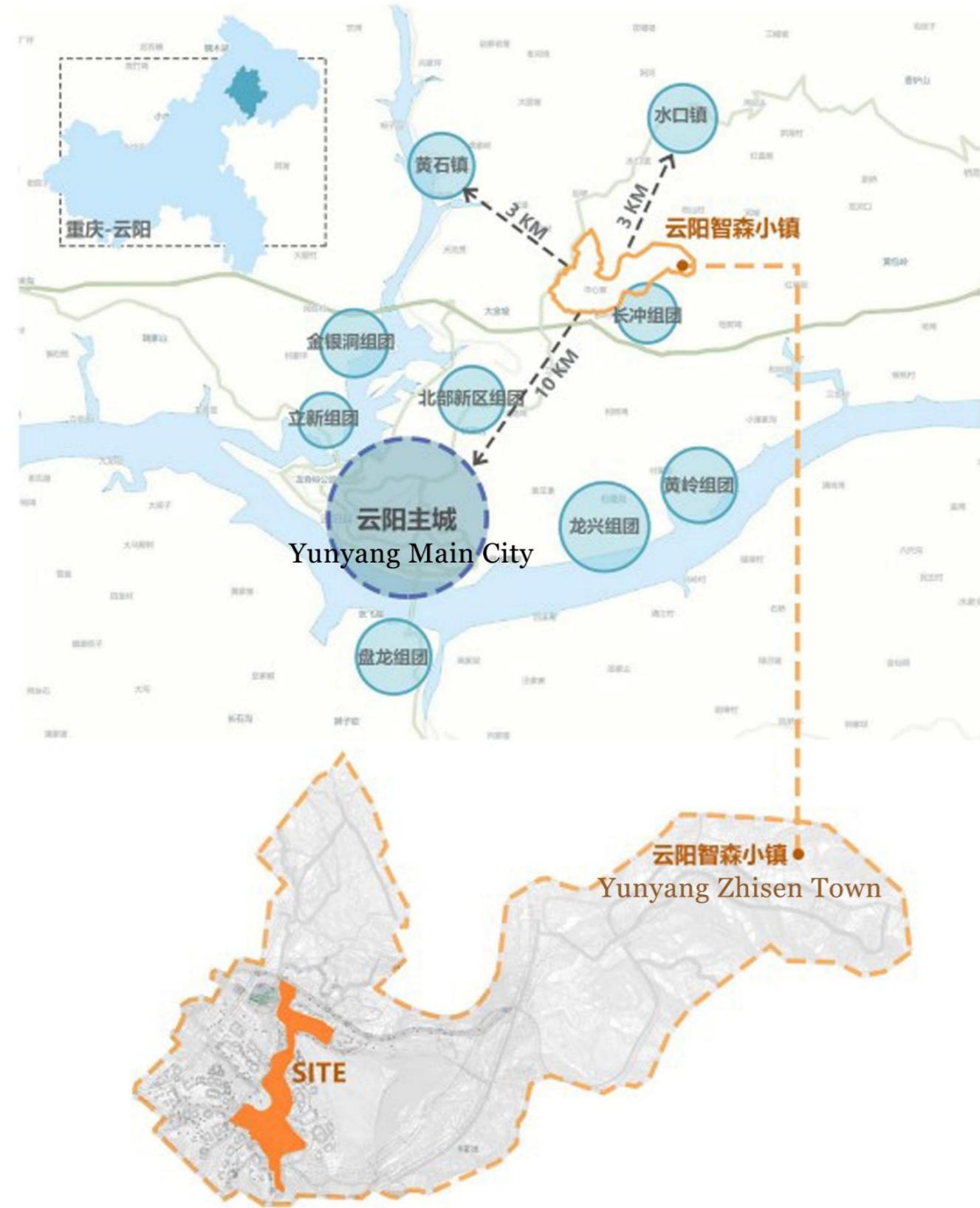
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Design Instruction



China has made great achievements in modernization, but at the same time, there are many problems in ecological construction and environmental protection, urban ecological space is gradually occupied, rural ecological service function is gradually weakened. Urban Waterfront Park, as an urban greening facility to improve urban landscape, change people's life and improve people's quality, can make urban waterfront park have the effect of rain and flood management to the construction of sponge city.

Taking the **Waterfront Park in Zhisen town of Yunyang City** as the research object, from the perspective of ecological experience, combining the knowledge of landscape design with the construction of Waterfront Park, this paper puts forward the landscape design method of waterfront park in a frame and as a whole, for the future construction of the waterfront park to provide reference.

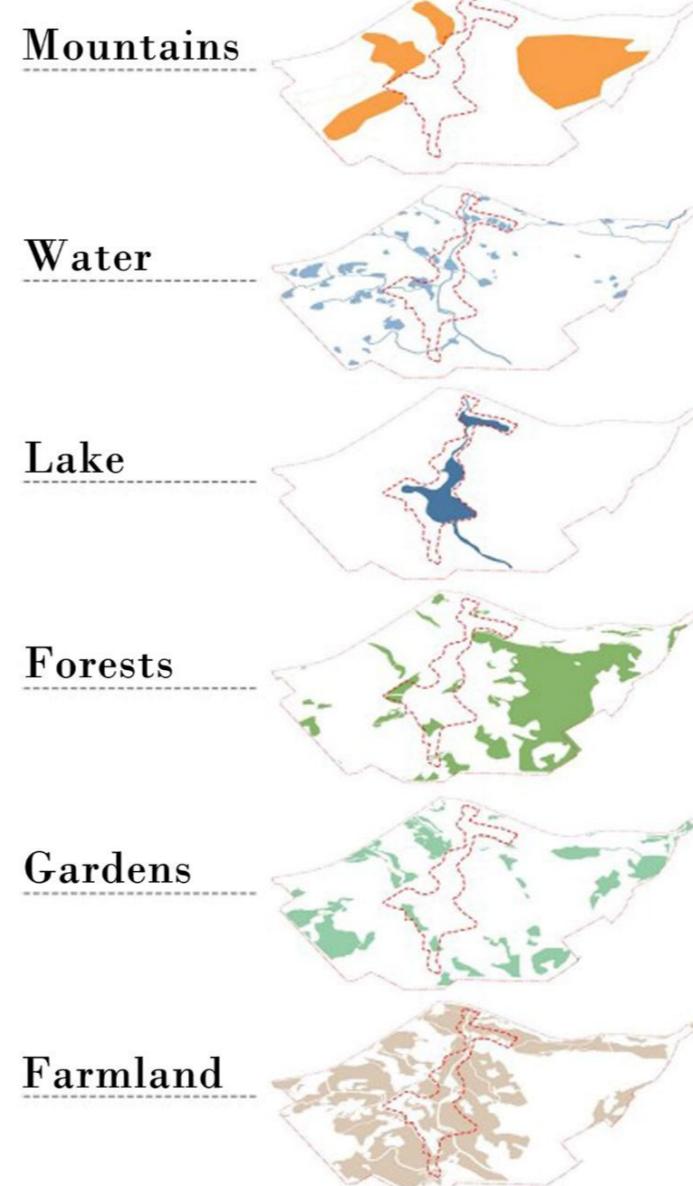


Existing Condition Analysis

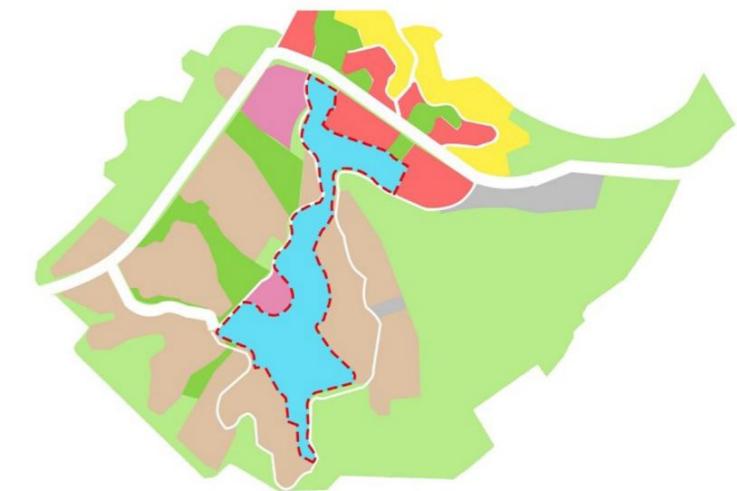
The project is located in the northeast of Yunyang City and is located in Shuikou industrial park of Fangzhou district, about 10km away from Yunyang city. It's about 3 km from Shuikou and the western town of Huangshi. Under construction, the zheng-wan high-speed rail line is close to the northern part of the base while the planned railway along the Yangtze River is close to the southern part of the base and the inter-city area of Kaiyun is close to the western part of the base.

Analyses of Existing Conditions

There are four hilltops around the project base, located on the west and east sides, and on the east side, the mountain body is the planning area of Country Park. The water source of the project base is a planned reservoir, which can be used to form a good wetland lake landscape; there are lots of Masson pine trees and small orchards distributed around the project base; there is a large amount of cultivated land in the project base, the soil is fertile and suitable for planting.



It is only three kilometres from the Huangshi high-speed rail station and about five kilometres from the Wong Leng railway freight station, about 60km from Wanzhou North railway station, the Shanghai-lotus Expressway is located to the south of the base, and the Xiao Jiang Expressway is planned to run through the base. The Green Core Waterfront Park is located in the southwest of the project base. It belongs to the traditional Bayu style area, the core area of big data industry, the business area in the north and the residential area in the east.



| | |
|---|--|
| ■ | Land for emerging industries, Residential land |
| ■ | Commercial land |
| ■ | Parking lot |
| ■ | Country park land |
| ■ | Community park land |
| ■ | Public land |
| ■ | Waterfront park land |

There are various types of land around the project base, and the adjacent land is for emerging industry, commercial land and residential land in the north, country park in the east. The community park land is distributed on the west side, and there is public land on the east side of the base facilities. Overall, the project base as an open waterfront park should be taking into account the surrounding land, as a public space, natural transition, provide activities, meet daily needs.



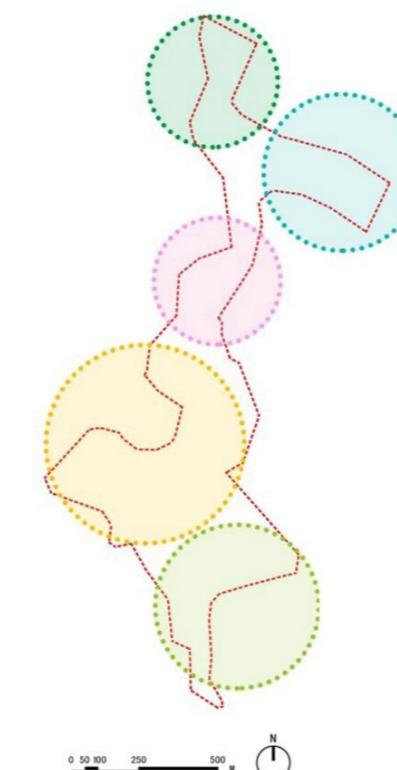
General Layout Plan

In the design process, with the help of Sponge City design strategy and other relevant content, the ecological characteristics of Waterfront Park, for the development of the city, bring new vitality; At the same time, the construction of a variety of vegetation ecosystems, purify the city's air, both beautiful landscape functions; With the workers to provide a good place for activities and adequate leisure facilities, to facilitate the public to exercise, performances, gatherings, meals and other activities, is an indispensable town entertainment happy leisure public space.

The project base is located in Zhisen Town, the core strategic position of Ecological Green, as a waterfront park, give its significance, first of all, its ecological significance, water resources. The source is the main component of the waterfront park, the reasonable use of water, the purification of water quality and the role of ecological conservation are the ecological design objectives of the Waterfront Park. Secondly, it is the social significance to stimulate the vitality of the city. As the central landscape node, the nature of the surrounding land is mostly commercial, residential and new industrial parks, parks as the opening of the city space, should meet the needs of residents and tourists daily life and entertainment, ease the pressure, etc. Finally, as the core landscape of the town its necessary economic significance, through building, beautiful natural wild scenery, attract tourists, promote the development of tourism, drive the development of the surrounding economy.



Sectorization



- Entrance Landscape Area
- Water-friendly Activity Area
- Huaxi District Scenic Area
- Cultural Display Area
- Eco-tourism Area
- Planning Area

It is divided into 5 functional areas, namely:

Entrance Landscape Area: the main entrance of the park distribution area to large, hard square-based, to create a representative landscape to attract visitors.

Water-friendly Activity Area: the main activity area of the park, with all kinds of living, ecological wetlands and wet pool activity space as the carrier, interactive entertainment as the theme, to create a good cultural and artistic atmosphere for visitors, provide multi-directional, multi-functional play service function as well as the popularization of related ecological knowledge education, function.

Huaxi District Scenic Area: a space for sightseeing, sightseeing and rest. The scenic spots with more plants, winding topography and the most beautiful scenery will be decorated with more rhythmic and colorful flowers and plants, view the path, the river layout of wet vegetation, build a rich plant landscape, form the peak turn, wave light cloud shadow, verdant trees, flowers and so on, moving scenery.

Cultural Display Area: is the downtown area of the park, its function is mainly to spread cultural education to visitors, usually become the center of the entire park. In landscape design, the cultural display area of the park should be used as cleverly as possible to create scenic spots with beautiful scenery, comfortable environment and good effect, convenient transportation and attract crowds by using the original topography, then with the local characteristics of culture, the landscape and cultural integration.

Eco-tourism Area: is to provide people to visit, rest, enjoy the scenery, or carry out light sports activities and other venues, in the landscape design, this area in the landscape to do rich and colorful, to natural landscape, mainly, with simple and elegant landscape sketch, the use of the area's original trees, the natural undulation of the terrain to build the landscape. Make some people linger, forget to return.



- ① Waterside Pavilion
- ② Covered Bridges
- ③ Waterfront Terrace Plaza
- ④ Falling Water Landscape
- ⑤ Featured Scenic Pavilions
- ⑥ Children's Playground
- ⑦ Children Playing Pool
- ⑧ Water Fountains
- ⑨ Trestle Bridge on Water
- ⑩ Water Viewing Platform



The pavement of the whole garden echoes the concept of ecological design and adopts permeable pavement. Pervious ground is a kind of open ground without pavement, green space, which is formed by paving, laying pervious pavement material or by the way of traditional material to keep the gap. The concept includes unpaved surfaces, perforated surfaces, and seamless forms of paving, which can be called broad, permeable surfaces.



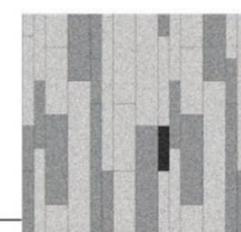
Pavement Plan



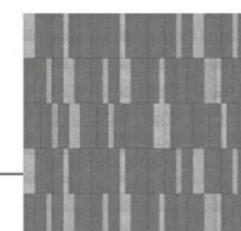
Permeable Tarmac



Preservative Wood

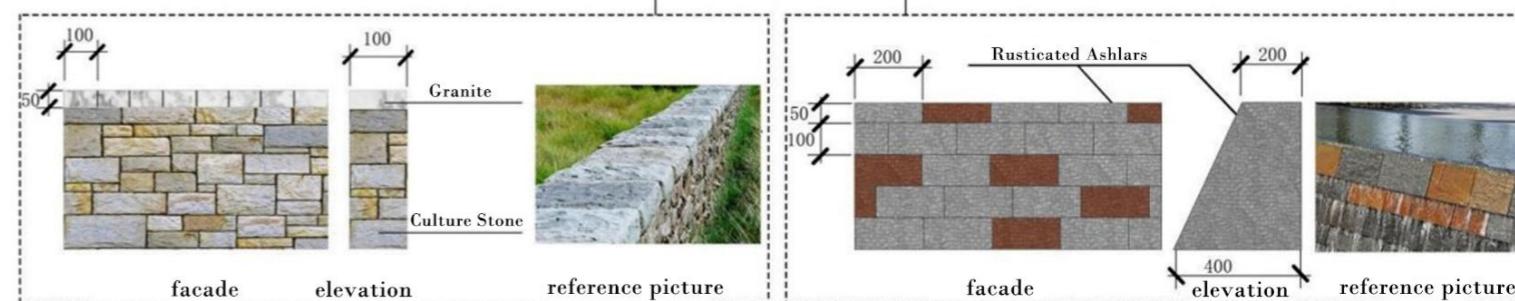


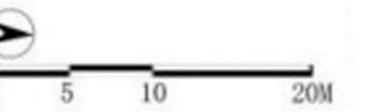
Granite



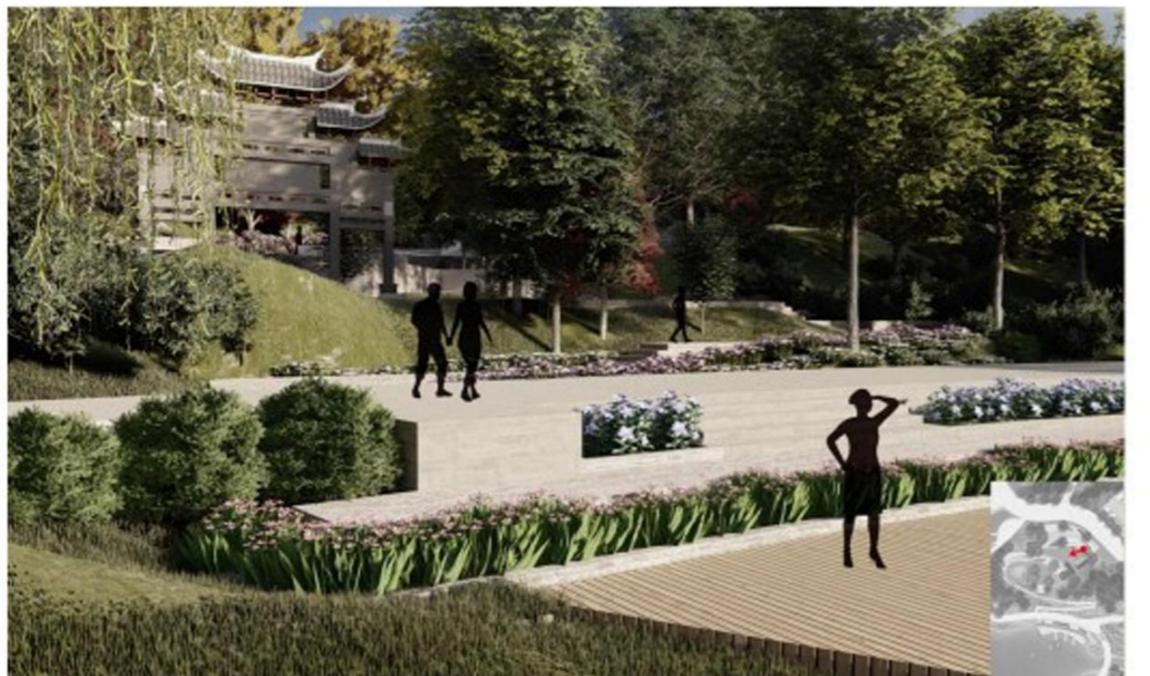
Granite

According to the definition of *pervious ground in green building evaluation standard* (GB/T 50378-2006), pervious ground, including bare ground, public green ground, green ground and hollowed-out area is larger than, equal to 40% of the hollow ground (such as grass brick), we can see it as a narrow concept.





- ① Chinese Teahouse
- ② Micro-topography
- ③ Wharf
- ④ Historical Sites
- ⑤ Parking Lot
- ⑥ Entrance Plaza



Service facilities are mainly divided into municipal, entertainment, commerce, transportation:

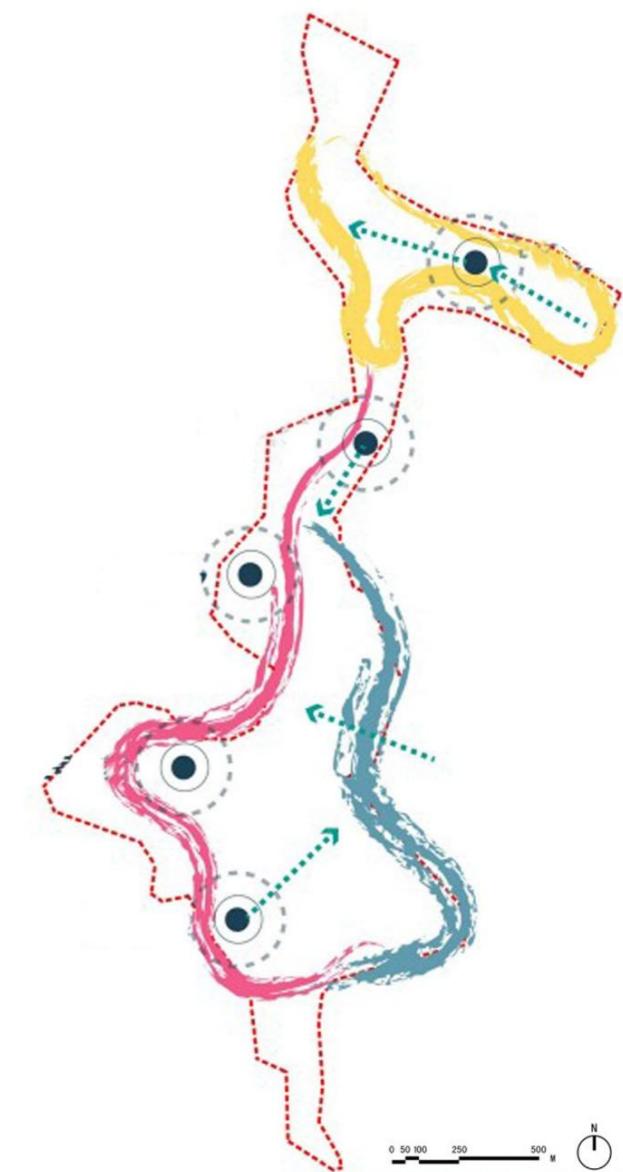
- Public toilets with a 250-metre service radius shall be provided at the municipal facilities on flat ground. Suitable size.
- The entertainment facilities are verandahs and pavilions. The scale is appropriate, the style Chinese garden, and the shape of the rich water complement each other.
- The commercial facilities are teahouses and Diaoqiao buildings, which combine the characteristics and topography of the scenic spots to create a unique style and meet the needs of visitors.
- The transport facilities include a main pier and two sub-piers to provide easy access to the water for visitors to experience the fun of swimming.



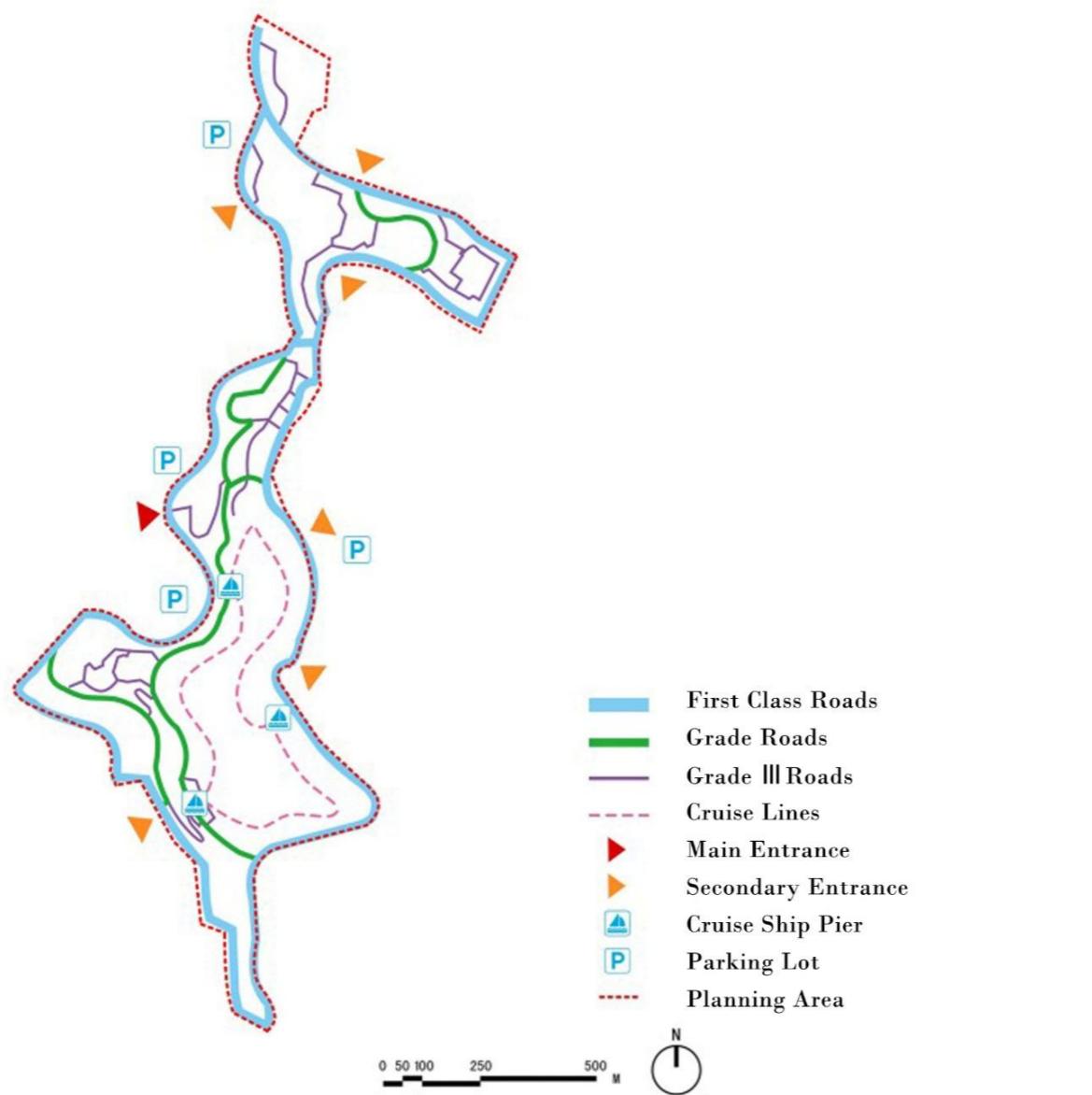
The landscape axis fully considers the relationship between the landscape, and strengthens the depth of field in the landscape construction. In order to diversify the functions of waterfront space, it is divided into three distinct features: celebration activity shoreline, cultural taste shoreline and ecological happy shoreline. The construction of the landscape structure takes into account the diversity of the waterfront spatial functions, the various scenic spots, fully extracts the intention of Bayu waterfront, and highlights the theme construction of the bridge scene, the fog scene, the stream scene, the wharf, and the cultural landscape, evenly distributed on the shoreline. Visitors, along the waterfront walk a certain distance will be able to enjoy a different landscape. The twists and turns of the shoreline also add to the interest of the tour.



- ① Mixed Field of Fast-growing Flowers and Plants
- ② Waterfront Boardwalk
- ③ Dam
- ④ Tourist Bus Stop
- ⑤ Waterside Pavilion
- ⑥ Public Toilet



- | | |
|--|---------------------------------|
| | Scenic Spots |
| | Celebration Shoreline |
| | Cultural Grade Shoreline |
| | Ecological Shoreline |
| | Landscape Axis |
| | Planning Area |

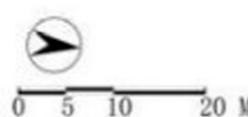


The main entrance of the Waterfront Greenway is located near the car park and the light rail station, and six secondary entrances are opened at the same time, so that the waterfront greenway has good accessibility. The grade of the road is clear. The first grade road is 5.5 meters, which is convenient for vehicles. The second grade road is 3.5 meters, which is the main promenade. The third grade road is 1.5 meters, which is convenient for visitors to have a deep tour. Full consideration of the regulation of traffic lanes, to meet the traffic diversion. At the same time, set up a water tour route to enrich the level of landscape. Combined with the original terrain, Lay Roads, reduce earthwork volume. The use of waterfront space, the setting of hydrophilic trestle, rich routes, widening, waterfront space to meet the needs of tourists to visit.



- | | |
|---|--------------------------------|
| ① | Creative culture shop |
| ② | Wharf |
| ③ | Hiking trails |
| ④ | Cruise Ship Management Center |
| ⑤ | High-altitude observation deck |

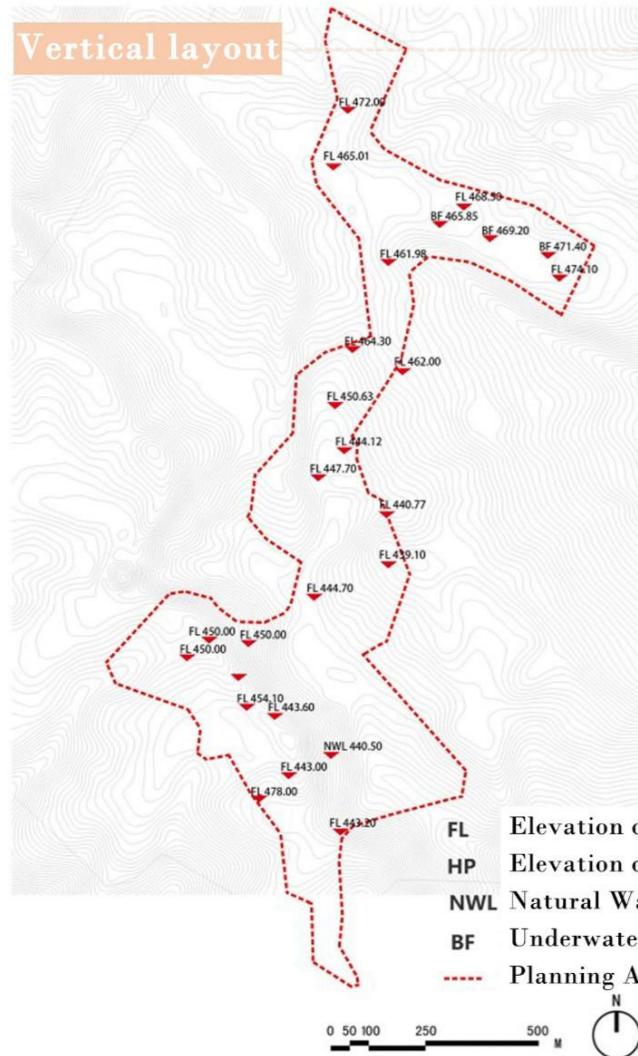




- ① Wangjiang Pavilion
- ② Water-friendly Boardwalk
- ③ Platform for Viewing Waterfalls
- ④ Water Plaza
- ⑤ Ecological Floating Island
- ⑥ Waterfalls
- ⑦ Rain Garden
- ⑧ Public Restrooms

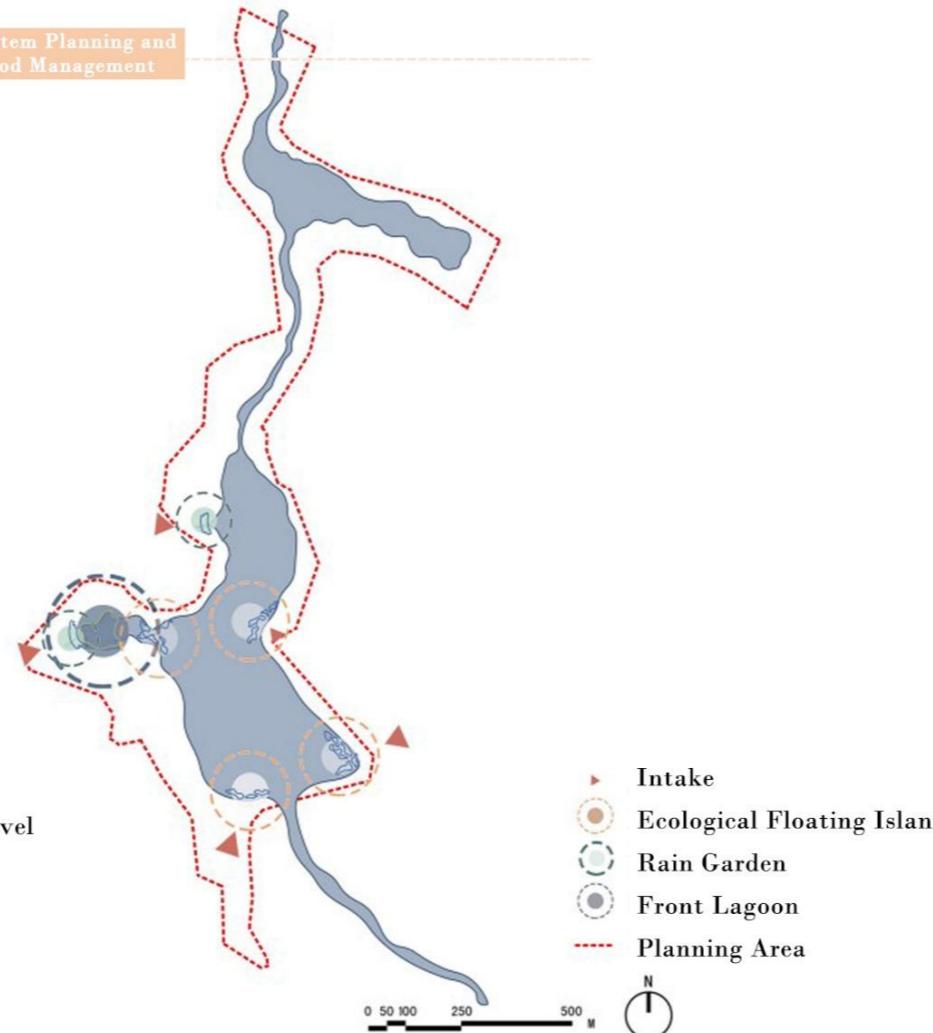
The design theme of the project base is “Bayu water rhyme, wisdom new solution”, using the waterfront space, echoing the overall wisdom theme of Zhisen town, to create a bayu-style waterfront wisdom greenway; the plan puts forward five strategies, reshaping the dock culture, creating a characteristic riparian tour line, waterfront smart runway, interesting foggy forest system and inductive interactive experience; the base will be divided into a total of 5 functional areas, they are the entrance landscape area, the water-friendly activity area, the Huaxi District viewing area, the cultural exhibition area and the ecological tourist area. Taking into account the diversity of functions of the waterfront space, each scenic spot fully extracts the intention of Bayu waterfront, highlight the bridge, fog, stream view, the theme of the cultural landscape of the pier to build.



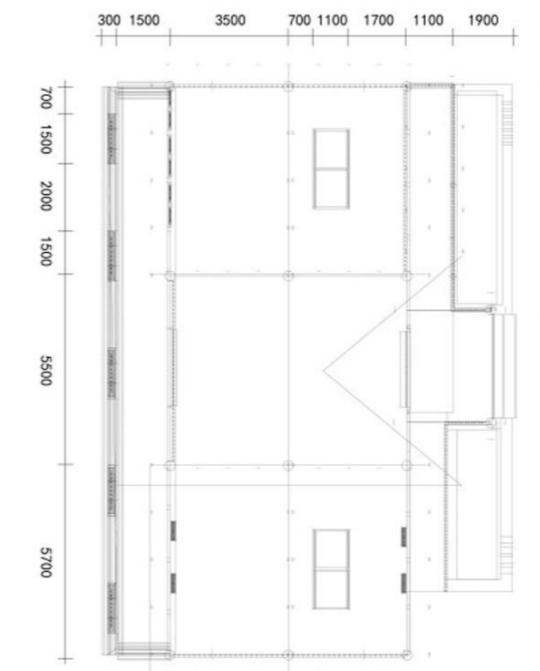


The planning of water system utilization and stormwater management consists of ecological floating island, storm-water garden and pre-pond.

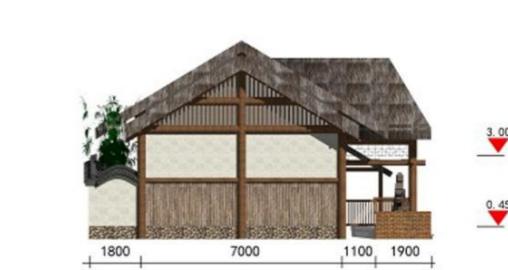
- Ecological floating island: the steep slope at the Binhu District River estuary prevents the installation of a rainwater garden, so an ecological floating island is set up to purify the water before it flows into the lake, improve the lake water quality environment.
 - Stormwater Gardens: A Cascade Stormwater Garden is set up at the level of the catchment adjacent to the lake. The catchment becomes an independent educational and recreational attraction while purifying the water.
 - Front Lagoon: a natural small lake between the rainwater garden and the ecological floating island will be converted into a front lagoon to achieve three-stage water quality treatment and form a unique landscape axis.



The plan of the teahouse



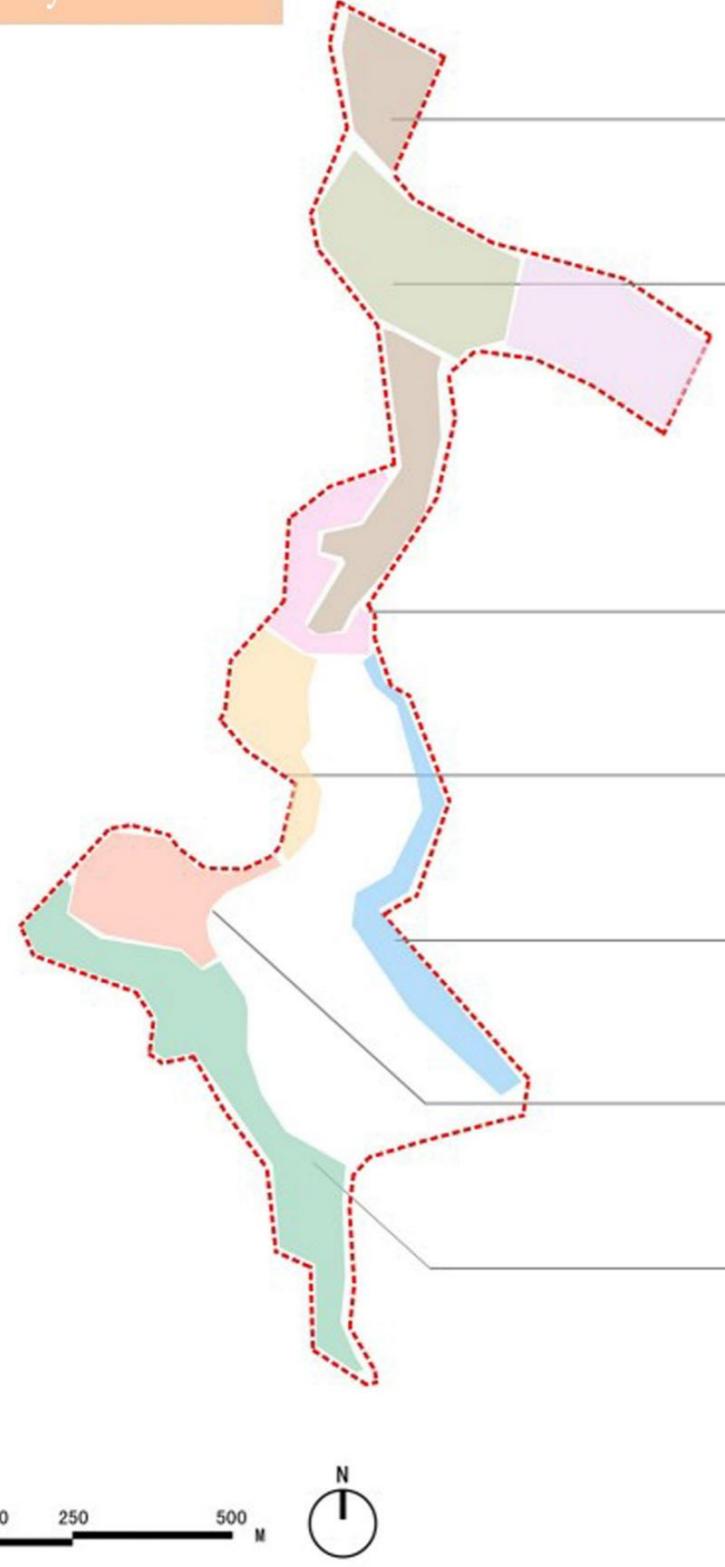
The front elevation of the teahouse



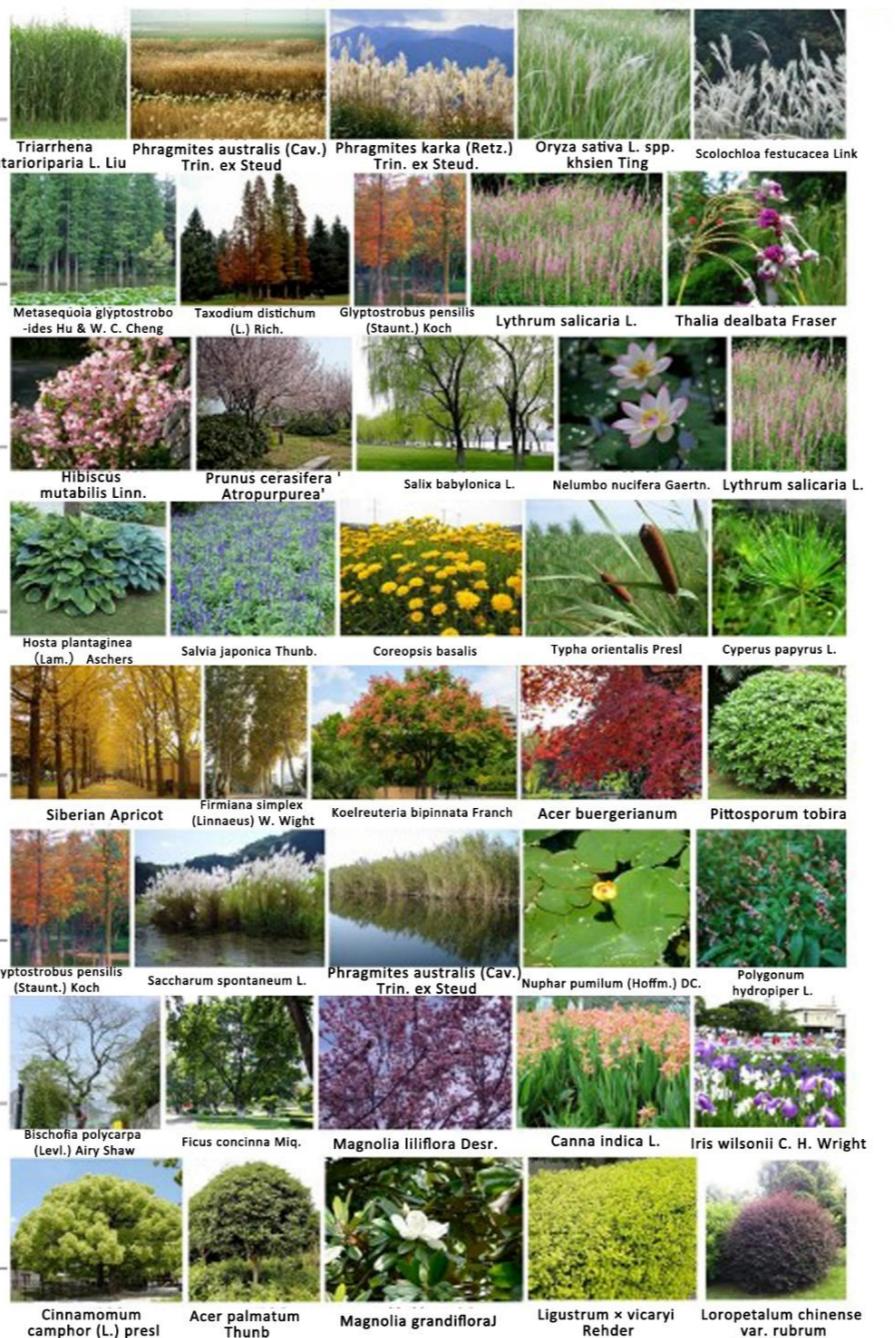
The side elevation of the tea room



Plant Layout Plan



It is divided into eight characteristic areas of plants, with flowers in all seasons. In the design of the local original tree species to preserve and use, the regional plant landscape and the landscape of each region, the cultural connotation of the performance.



| | | | | | | |
|----|--|-------|-----------|---------|---------|--|
| 10 | <i>Acer buergerianum</i> | 20 | 500–550 | 450–500 | — | |
| 11 | <i>Sapium sebiferum</i> (L.) Roxb. | 23–25 | 700–800 | 450–500 | — | |
| 12 | <i>Koelreuteria paniculata</i> | 28–30 | 800–1000 | 350–450 | 200–300 | |
| 13 | <i>Prunus serrulata</i> var. <i>lanuginosa</i> (Carri.) Makino | 16–18 | 450–500 | 400–450 | <70 | |
| 14 | <i>Jacaranda mimosifolia</i> D. Don | 16–17 | 500–650 | 300–400 | — | |
| 15 | <i>Metasequoia glyptostroboides</i> Hu & W. C. Cheng | 19–21 | 1000–1200 | 250–300 | — | |
| 16 | <i>Prunus cerasifera</i> 'Atropurpurea' | 16–17 | 400–450 | 300–350 | <50 | |
| 17 | <i>Siberian Apricot</i> | 15–17 | 300–350 | 250–350 | 30–50 | |
| 18 | <i>Magnolia liliiflora</i> Desr. | 12–13 | 500–600 | 300–350 | 100–150 | |
| 19 | <i>Hibiscus mutabilis</i> Linn. | 7–9 | 250–300 | 200–250 | — | |
| 20 | <i>Acer palmatum</i> Thunb | 14 | 250–300 | 300–350 | <70 | |

Shrub configuration table

| Serial Number | Name | Specifications | | Unit | Density |
|---------------|---|-----------------|------------|----------------|-------------------|
| | | Crown width(cm) | Height(cm) | | |
| 1 | <i>Melaleuca bracteata</i> F. Muell. | — | 120–150 | | — |
| 2 | <i>Triarrhenes lutarioriparia</i> L. Liu | 200–250 | 140–160 | | — |
| 3 | <i>Phragmites australis</i> (Cav.) Trin. ex Steud. | 80–120 | 120–150 | | — |
| 4 | <i>Photinia serrulata</i> | 200–240 | 150–170 | | — |
| 5 | <i>Phragmites karka</i> (Retz.) Trin. ex Steud. | 60–80 | 80–100 | | — |
| 6 | <i>Oryza sativa</i> L. spp. <i>khsien Ting</i> | 180–200 | 120–140 | | — |
| 7 | <i>Rhododendron simsii</i> & R.spp. | 130–150 | 110–130 | | — |
| 8 | <i>Jasminum nudiflorum</i> Lindl. | — | L80–100 | m ² | 81/m ² |
| 9 | <i>Pittosporum tobira</i> | 40–50 | 40–50 | m ² | 25/m ² |
| 10 | <i>Buxus sinica</i> var. <i>parvifolia</i> M. Cheng | 15–20 | 25–30 | m ² | 36/m ² |
| 11 | <i>Gypsophila paniculata</i> L. | 25–30 | 25–30 | m ² | 49/m ² |
| 12 | <i>Rhododendron simsii</i> & R.spp. | 20–30 | 30–40 | m ² | 64/m ² |
| 13 | <i>Euonymus japonicus</i> 'Aurea-marginatus' Hort. | 20–30 | 30–40 | m ² | 49/m ² |
| 14 | <i>Loropetalum chinense</i> var. rubrum | 20–25 | 25–30 | m ² | 64/m ² |
| 15 | <i>Ligustrum × vicaryi</i> Rehder | 20–30 | 20–30 | m ² | 81/m ² |
| 16 | <i>Rhapis humilis</i> Bl. | 80–90 | 100–120 | m ² | 2/m ² |
| 17 | <i>Nephrolepis auriculata</i> (L.) Trimen | 20–30 | 20–30 | m ² | 64/m ² |
| 18 | <i>Nandina domestica</i> Thunb. | 30–40 | 50–60 | m ² | 25/m ² |
| 19 | <i>Misanthus sinensis</i> cv. | 40–50 | 50–60 | m ² | 9/m ² |
| 20 | <i>Iris wilsonii</i> C. H. Wright | 30–40 | 40–50 | m ² | 36/m ² |
| 21 | <i>Rhizoma Iris Japonicae</i> | 15–20 | 25–30 | m ² | 64/m ² |
| 22 | <i>Juncus effusus</i> L. | 10–15 | 40–100 | m ² | 81/m ² |
| 23 | <i>Canna indica</i> L. | 30–40 | 60–80 | m ² | 36/m ² |
| 24 | <i>Lythrum salicaria</i> L. | 30–35 | 40–50 | m ² | 36/m ² |
| 25 | <i>Thalia dealbata</i> Fraser | 30–35 | 80–100 | m ² | 9/m ² |
| 26 | <i>Ophiopogon japonicus</i> (Linn. f.) Ker-Gawl. | 10–15 | 15–25 | m ² | 5/m ² |
| 27 | lawn | — | — | m ² | Full Ground |

Arbor configuration table

| Serial Number | Name | diameter(cm) | Height(cm) | Crown width(cm) | Branch Point(cm) |
|---------------|--|--------------|------------|-----------------|------------------|
| 1 | <i>Podocarpus macrophyllus</i> (Thunb.) D. Don | 28–30 | 400 | 320 | — |
| 2 | <i>Cinnamomum camphor</i> (L.) presl | 20–21 | 600–700 | 300–350 | 180–220 |
| 3 | <i>Osmanthus fragrans</i> (Thunb.) Lour. | 15 | 500–700 | 450–550 | 120–130 |
| 4 | <i>Citrus medica</i> L. | 21–23 | 500–600 | 300–350 | <50 |
| 5 | <i>Cinnamomum japonicum</i> Sieb. | 16–17 | 600–700 | 350–400 | 150–200 |
| 6 | <i>Michelia chapensis</i> Dandy | 19–20 | 450–500 | 600–700 | — |
| 7 | <i>Magnolia grandiflora</i> | 12–13 | 600–700 | 300–350 | — |
| 8 | <i>Ficus virens</i> Aiton | 50–59 | 900–1100 | 500–600 | — |
| 9 | <i>Celtis sinensis</i> Pers. | 23–24 | 700–900 | 400–500 | 250–300 |

July 2022

Designed by YANG Weiyi