Research on the Design of Sports and Leisure Landscapes Based on the Concept of Health — the Case of Chinese Kylin Water Town

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ABSTRACT

The design concept for the Kylin Water Township is "Stamped into Water," with the design layout drawn from the extraction of the poppy flower pattern and "into the water." This theme was chosen after a comprehensive investigation of the natural, traffic, and cultural circumstances of the Kylin Water Township, as well as relying on earlier design principles and inspirations. Making the most of the local water resources and incorporating them into the design's varied sceneries is accomplished through the use of "water." The design also wholly considers the demands of different age groups regarding sports facilities and venues. It includes ecological development, thereby boosting the waterfront landscape's attractive quality along the Xiaoxiang River and elevating the idea that sports and leisure are healthy. The complete landscape design displays the waterfront view of the Xiaoxiang River, where people may fit on the left bank and unwind on the right bank.

Keywords: Greenway landscape, Landscape design, Waterfront landscape, Exercise, Health.

1. INTRODUCTION

Kylin Water Town is located in Yunnan, in the south of China. The natural environment of Kylin Water Town is suitable for developing functional landscapes to provide access to people and contribute to tourism projects. The design of this project will be developed through three significant factors: natural environment, transportation conditions, and cultural conditions integrating ecological development and exercise and leisure health concepts in the waterfront landscape of the Xiaoxiang River.

The waterfront sports and leisure park will be designed by integrating the poppy flower form and legend with the Chinese culture of Kylin. The Kylin is a sacred animal in traditional Chinese culture, and the area named after it incorporates Chinese cultural elements such as waterwheels, wooden stacks, etc.

2. PROJECT ANALYSIS

An area's topography, landforms, soils, water features, plants, and animals are all combined to make the landscape[1]. The natural environment is one of the decisive factors in forming culture, influencing people's aesthetic and value orientation. It is also possible to say that "the landscape is a cultural carrier"[2]. The Kylin, also known as Ying Long, an ancestor god of the Yellow Emperor who holds celestial powers and may help humans escape catastrophes and sufferings, is not simply a symbol of good fortune in ancient Chinese culture[3]. According to myth, all-natural disasters on Earth would cease to exist when the unicorn stepped on the lucky clouds[4]. The site's name, "Kylin Water Township," captures the goals and dreams of the residents of this spot.

The area in the Kylin Water Township is still primarily unspoiled by artificial development, according to a previous site visit. Nevertheless, a beautiful water village landscape setting that satisfies the demand for harmony between man and environment and a return to simplicity may be developed in this one-of-a-kind situation. Additionally, it is aligned with the local government's plan for promoting tourism. ("Figure 1").

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Figure 1 Site situation of Kylin water town.

2.1 Physical Conditions

Oujing City, in the Yunnan Province of China, is situated on the eastern part of the Yunnan-Guizhou Plateau, which comprises the provinces (regions) of Yunnan, Guizhou, Sichuan, and Guizhou[5]. The landscape, which has an average elevation of around 2,000 meters, is high in the northwest and low in the southeast. It has four seasons comparable to spring and a subtropical monsoon climate with little to no scorching heat in the summer and infrequently very harsh cold periods in the east[6]. With its numerous topographical changes and rivers winding through it, the surroundings evoke images of a serene and lovely mood. Kylin Lakes Township is a natural wonderland with mountains, lakes, woodlands, agriculture, and a rich water system. It is situated north of Liujia Zeng in Yanjiang Township, Qujing City, Yunnan Province, China.

2.2 Traffic Conditions

The Kylin Water Town is often referred to as "East Town" and "key to Yunnan" [7], is located in the Nangui-Kunming Economic Zone of the Western Development, only one hour's drive away from Kunming, the tourism distribution centre of China. It is located in the South Guizhou-Kunming economic zone of Western Development, about an

hour's drive from Kunming, Yunnan's central tourist distribution hub. The establishment of Kylin Water Township has been an excellent chance, given the recent rapid growth of Yunnan's tourism industry. A bypass has been created to the east, and the Kunqu Expressway lies roughly 4 kilometres northwest of the attractive area. The Kunqu, Qu Lu, and Qu Sheng highways, the Gui Kun Railway, and the national roads 320 and 326 are all connected. The current integrated transportation system, which is developing quickly, is also a great transit option for the development of scenic areas [8].

2.3 Cultural Conditions

The area is home to several ethnic groups and is rich in prehistoric, tribal, Three Kingdoms, Ming, and Qing civilizations. The most well-known of these is the \$\mathbb{R}\$ (cu an) culture, where the Cuan Long Yan and Cuan Bao Zi monuments, which are regarded as the "treasures of the southern monuments" and "the first of the holy things," respectively, are recognized for their tremendous historical and calligraphic significance. The Tiansheng Cave, a subterranean palace of art, is regarded as China's "second wonder" and is located in the Yunnan Province. The local government has recently proposed to construct an ecological recreation and sports corridor along the Nanpan River to develop a "pioneering location for the

integration of agriculture, tourism, and culture in Yunnan Province, China" based on natural ecological resources and regional cultural advantages: Dongshanke Yihei Rural Tourism, Kylin Water Town, Jinlin Bay Hot Spring Tourism Resort, and other projects.

3. CASE STUDY

A lake town in southern China called Wuzhen has a design aesthetic that strongly emphasises the interactions between "site and human, nature and human, and human and human." This dynamic and symbiotic arrangement demonstrates the waterscape's intrinsic harmony, which is based on the idea of harmony between landscape and ecology and the interaction of water with natural or artificial features. Based on this principle, the waterscape of the old town is increasingly being incorporated into the supporting construction of the water township structures, significantly increasing the viewing, playing, and audio-visual comfort of visitors[10].

A distant vision of the past can be seen in Wuzhen's Qiao Li Qiao environment, which has scaly river waves, two old stone bridges staggered horizontally and vertically, and a feeling of static beauty. A wind caresses the water's surface, Ling moves, and the stone bridges echo, displaying a dynamic sense of beauty. Stone bridges and water landscapes of symbiosis and harmony are such beautiful nature.

The city's flowing water bodies play a crucial part in maintaining the ecosystem's general balance, beautifying the neighbourhood, and cleaning the air; the negative ions they release also provide individuals with a sense of physical and mental well-being[11].

Visitors can explore the historic water town and enjoy water features and other landscapes associated with humanity and nature, where the visual and emotional aesthetics of the ecology are evident. A good illustration of ecological aesthetics in waterscapes may be seen at Wuzhen's West Gate at night[12]. Tourists grab a bottle of wine as dusk falls, view the dramatic architecture on the beach across the river, or release the lotus lanterns next to the sea. By combining the four elements of people, water, scenery and objects, we can create a static, harmonious, ecological and humanistic waterscape atmosphere. It enhances the waterfront architecture's imaginative and lovely mood, and being there is enjoyable.

4. BASIS OF DESIGN

4.1 Sources of Design

The river sport and leisure greenway design in Kylin Water Township is called "Stamped." The ancient Greeks had the goddess of agriculture hold a poppy in her hand to represent their devotion to the flower, which the Egyptians cherished. According to ancient Greek mythology, the demon god of death, Hypnos, had a son named Mafia who carried a poppy to prevent his sleeping father from being awakened. Folklore holds that the poppy is enigmatic and rife with hypnosis, drowsiness, and amnesia. The significance that the Kylin Water Village adds to the experience is encapsulated in the poppy language, representing "patience, repose, obedience, tranquillity, and solace"[13]. The spreading leaves are pinnately alternated and beautiful, and the flowers range in diameter from 30 to 80 cm[14]. "Stamped" describes the outline of the poppy, which is shaped like a seal. The leaves systematically stretched, providing landscape's overall structure and layout. ("Figure 2")

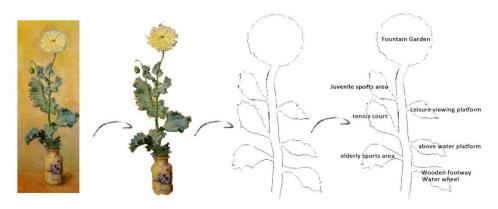


Figure 2 Design inspiration.

The floral arrangement breathes life and greenery across the whole area, bringing dynamism and a sense of vigour to the area for guests. The "print" is the focal point of the pattern, which also has parallel water, road courses, and flower path roads. The leaves are intended to link the site to the many locations that are useful for people's activities and leisure, exploiting nature's crooked lines to link the entire site and flora to intersperse the gaps in the site to merge the original ecosystem with contemporary functional facilities.

Due to the abundance of natural water resources in Kylin Water Township, the environment known as "Stamped into the water" is transported by the water in its natural, unpolluted condition. A waterscape with artificial and natural water features that complement and coexist would be created by integrating the original water source into the artificial environment.

The "water" represents people's love of nature, and later on, humanistic landscaping and other practice areas are added, enhancing the landscape's attractive, cultural, entertaining, and valuable aspects. This combination of "water" and sports and leisure in a natural setting, with the dynamic natural, humanistic environment, better captures the flavour of sports and leisure in Kylin District. It provides reasonable physical and mental enjoyment, fresh and natural, without the harsh and cold feeling of contemporary architecture, and creates symbiosis, co-prosperity, enjoyment and elegance between the human and natural environment in the most organic way [15].

4.2 Principles of Design

The objective of "Stamped into Water" is to recognize, safeguard, and use the Kylin district's

current landscape resources. The design takes into consideration both human traits and the local environment. It starts with the space needed to create a moving environment, preserves the natural length of the river, maximizes the environment, and combines the humanistic idea to express respect and acknowledgement of people and nature and the economic, spiritual and cultural functions of the landscape.

Water, a special ingredient that nature provides, was essential at the beginning of human existence. Water is the foundation of Kylin Water Township. In order to secure the long-term development and use of water township resources while reflecting local features and maintaining the survival of species, natural water resources and green space resources must be developed and exploited reasonably. The core of this design concept is the scientific alteration of the surrounding environment to improve human habitation in Kylin Water Township while preserving the delicate ecological balance.

Based on its geographic location, ethnic culture, and historical development, Kylin Water Village has a distinctive charm. Artificial water features can enhance quality and functionality while preserving inherent beauty [16]. Different types of water can be used to alter the atmosphere of the aquatic environment.

Every stone, gravel, and blade of grass in the landscape adds to its importance. Plants and landscape elements should respect local culture, and other design elements may enhance it further such that their presence produces both beautiful scenery and a strong sense of the humanities in the region ("Figure 3").

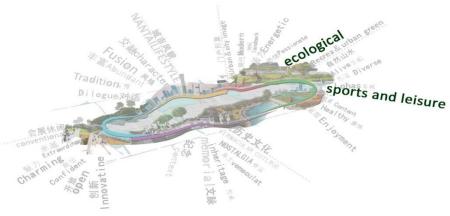


Figure 3 Design concept.

5. DESIGN ANALYSIS

5.1 Landscape Structure Layout

The integration of different locations should be addressed in favour of focusing mainly on some regions of interest in landscape design. The poppy's organic form served as the inspiration for the design. The model is solely based on the poppy flower's natural form, and the design and layout of the Kylin Water Town "Print into Water" greenway along the Xiaoxiang River. When viewed from above, the addition resembles a flower in full bloom, representing the vitality the entire site receives. The flower leaves symbolise the garden, while the flower path represents the road. The sports and recreation area is divided into sports fields and facilities for different age groups, and it is connected to the rest of the region by various routes. The landscape and recreation area comprises various recreational objects and plant landscape nodes. Zones that are dynamic and static are divided. Leisure amenities include viewing decks, resting places, waterfront landscaping, and artificial

fountains. Sports facilities include plastic running tracks and courts and various outdoor workout equipment for middle-aged, elderly, and young individuals in various regions. Plants divide the grounds, creating an open area that feels somewhat natural. The order and content of numerous activities are guaranteed, creating a workable, functional organisation.

The quality of the landscape design and functional needs are artificially improved under Kylin Water Town's original natural landscape style. The riverfront facility area is more open to improving visitor relaxation, which better communicates the objective of framing and creating a landscape. The landscape is a natural and artificial surface view with aesthetic elements planted around each sports area with a diversity of plants that works as a natural shade barrier and gives protection and solitude. When visitors walk or jog down the plastic track, the freshness of the water delivers fresh air and improves the quality of the oxygen inhaled, giving them a whole experience of being in nature: sport, leisure, and relaxation. ("Figure 4")



Figure 4 Design functions.

5.2 Functional Zoning

People's needs for the landscape include a combination of ecological, cultural, and security needs and material and spiritual aspects. First, the environment needs to offer safety and cover. More public facilities must be built in addition to green spaces for people to participate in leisure and sporting activities. One of these prerequisites is the peaceful coexistence of humans with the environment, nature, and other people. As a result, the functional placement of the landscape is initially described before proper functional zoning is taken into consideration during the conceptual stage of the design of the "Stamped into Water" landscape design along the Xiaoxiang River in Kylin Water Town. In this scenario, activities, leisure facilities, and observation areas are

intermittently but orderly divided into both sides of the road, with the left bank predominantly for recreational sports and the right bank primarily for recreational viewing areas. The recreational area is separated from the sports area for people with different needs. The vegetation is used as the dividing area to provide a natural and semi-open atmosphere to meet people's needs better. On the right side of the main road, the leisure and landscape area is situated, with diverse leisure and landscape facilities spaced out regularly and discrete functional groups that do not duplicate or clash with one another. The different facilities, which include shoreline observation pavilions, waterwheels, and wooden stacks that face out over the water and show distinct cultural tastes, enable independent groupings of landscaping elements and diversity of uses for the whole landscape belt.

There is no shortage of intimacy, reflecting the idea of natural comfort, and each distinct facility mirrors the other in the aesthetic element of the primary functional block.

5.3 Design of the Road System

The landscaped walkway "Stamped into Water" mixes a systematic and haphazard layout. The course is divided into sections based on how the terrain functions, and each fork's direction is indicated. The main line, which is the primary one and the facilities along it are coordinated, marks the boundary between the segments at the intersection of the changing landscape area[17]. The design of the landscape roads in this concept must offer longterm benefits while minimizing the destruction of the native landscape and the natural ecosystem while nevertheless facilitating traffic and describing the locations to which each route leads. Additionally, landscaped roads are constructed following regional standards, a livable local environment, human and natural landscape concerns, and other local criteria.

5.4 Plant Configuration

The most important characteristic of plants is that they can grow and live. Plants are among the most dynamic and active building elements for gardens and other design projects, and all their other characteristics result from their life[18]. The "Stamped into Water" sector of Kylin Water Village is a stunning area with subtropical plants. This design focuses on the growth of various garden plants and uses the advantages of local plant resources to create a landscape appropriate for the site and the tree.

In this case, the main thoroughfares and exits have a symmetrical natural structure, while the green areas on the property have a regular arrangement of plant groups in rows. Both the natural motion of plant materials and the threedimensional structural organization of plant space are emphasized[19]. The riverside of the water village is surrounded by silk weeping willows, which serve as a protective and greening element. In contrast, the sports field is primarily lined with a large-leaved lady's mantle, which serves as a roadside tree and may cause sight lines as a road marker — interspersed with "red maple, cherry blossom, rhododendron," and other seasonalchanging ecological environments. Other plants and flowers, including the exquisite lotus and the

mountain magnolia, as well as the golden mountain, silver flower, and clover, generate noticeable changes in the spatial hierarchy and add to the richness and vibrancy of the entire area. The "print" can also reflect in the water.

The essential plants in this case's design are:

- Upper-level plants include chrysanthemums, red maple, silverwork, and willow.
- In the middle are cherries, azaleas, magnolias and golden bayberries.
- Lower plants comprise willow verbena, stonecrop, honeysuckle, hongi lavender, and plantain.
- Clover is a groundcover.
- Aquatic plants contain lotus, reed, and rutabaga.

Based on the biodiversity idea, trees, shrubs, flowers, and aquatic plants are planted in three dimensions by their behaviours. Several site arrangements are made based on the plant's height, colour, and aroma [20]. The whole "Stamped into the Water" of Kylin Water Township is evergreen and pleasant throughout the year thanks to the biological environment of each season, which includes evergreen trees, flowering lawns, and open spaces in the forest.

The layout of the plants has a significant effect on the overall landscape. In order to protect the environment of the water township, it is essential to

- 1. clean the air;
- 2. filter and minimize pollution;
- 3. reduce noise so that people can hear the sounds of nature; and
- 4. promote the sight of people swimming in it to choose the area, road, facilities, and scenery.

Spring brings cherry blossoms, fall brings maples, summer brings lotuses, and winter brings evergreens. In order to achieve Kylin Water Town's goal of "printing into the water," the plant arrangement makes the entire site romantic in the spring, thick in the summer, stunning in the fall, and verdant in the winter. ("Figure 5")

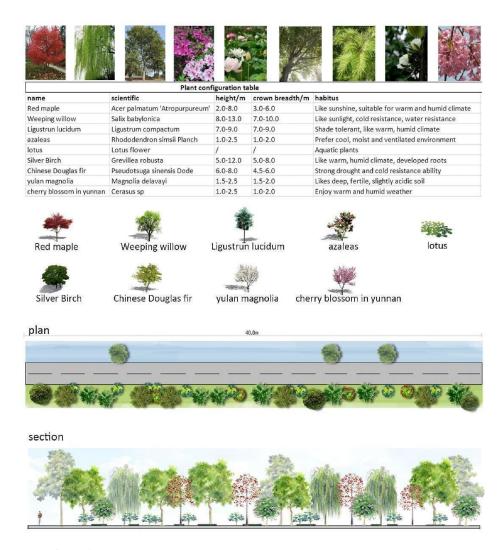


Figure 5 Plants configuration.

5.5 Configuration of Public Facilities for Recreational Sports

The idea focuses on leisure and sports, with various sporting facilities to meet the needs of various individuals divided by age and varied leisure vignettes to showcase various cultures and objectives.

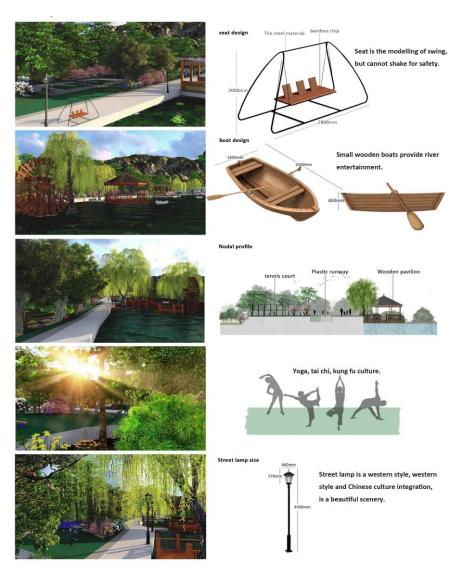


Figure 6 Functional facilities.

In "Figure 6", there are:

- Artificial Fountain Garden: By incorporating manufactured features into the natural landscape, the Kylin District's overall landscape quality will be enhanced, and there will be a more harmonious coexistence of the natural and artificial worlds.
- Waterfront landscape terrace: A landscaped terrace with seating areas and flowerbeds is constructed along the riverbank to provide visitors with a place to relax and take in the surroundings.
- Viewing pavilion: The pavilion may be used as a dock for boats and riverside relaxation while boats are rowing through for a rest.

- Waterwheel: Ancient Chinese labourers invented the waterwheel as a tool for irrigation[21]. It is a heritage of the renowned Chinese culture in the Kylin District and exemplifies the ingenuity of the Chinese people. It is also a vital component of Chinese farming culture.
- Wooden path: a great place beside the lake for a stroll while admiring the lotus, leading to a view of the waterwheel. The following workout apparatus is available at youth sports facilities: three bars, a balancing beam, climbing bars, stretchers, and upper limb traction trainers. The Kylin Water Township's "Stamped into the Water" is a sport and leisure activity and a sporting and cultural legacy. The location also has a swing, a game established by ethnic minorities in ancient northern China.

The friendly match benefits from the river's wetness, the flowers' fragrance, and the trees' life. The tennis court is situated on the side of the major road and is surrounded by trees and flowers. Different levels of openness offer various spatial experiences, and the semi-open space created by combining plant cages with apertures lends atmosphere to the whole court.

- Fitness and exercise gear for the elderly: space walkers, Tai Chi pushing plates, back stretchers, and three-way waist turners are all wonderful options. There are additional locations for friendship and connection that are open and unrestrained.
- Plastic runway along the road: This 1.2-meter-wide runway runs down the left side
 of the main road and allows travellers to
 see the beauty of the route's curves. The
 excellent air and environment are great for
 jogging, with trees for shade on one side of
 the runway and river wetness on the other.

6. CONCLUSION

Human emotion and sense of experience are the yardsticks to evaluate scenery. In order to finally realize the vision, stamp into Water is designed to improve the local ecology and provide places where locals and visitors can swim, relax and enjoy themselves while achieving the highest level of comfort and care psychologically.

The landscape is a cultural carrier. The "Stamped into Water" project fully uses the region's most valuable and beneficial water resources to improve the environment, clean the air, and nourish the soil and flowers while also improving the local air quality, greening the area and increasing atmospheric humidity.

The water-friendly landscape is a critical component of the design (it is the main component of the water body, combining other forms of organization into a specific regional space). It reduces the distance between people and one another and between people and nature so that people engaging in leisure and sports can experience Kylin District's distinctive humanistic aesthetic.

The development of a humanized landscape is a goal of landscape design, as well as the unavoidable social progress that results from people's involvement in work, play, and communication, as well as the current landscape's amenities, which

provide people with more than just aesthetic, olfactory, and spiritual comfort. Any landscape should consider environmental preservation in addition to the needs of the inhabitants. Humans are the landscape's users, experiencers, and assessors, and their behavioural choices directly impact it[22]. The design idea ultimately divides the sports and leisure facilities into functional groups, target demographics, and local resources. Because there is always something to do after leisure, it enables people to pursue behavioural, psychological, and spiritual satisfaction. It also enables them to enjoy leisure via movement.

The design of the site setting incorporates quality sports and recreation facilities as well as elements of the local environment, history, culture, and social context. and characteristics. The layout is adaptable and spaced by regional limits, emphasizing the experience of a beautiful and relaxing environment and nature. The design also considers the needs of various age groups for athletic facilities, differences in the outside temperature, air quality during athletics, etc. The landscape is designed to offer a humanistic, natural, and ecological backdrop, to put it simply. In addition to maintaining the natural ecosystem to the maximum extent possible, artificial landscape amenities have been added to the site to maintain its overall original character and improve user experience. It makes it possible for people who live in crowded cities to look for the solace and tranquillity that nature offers.

Kylin Water Town is a waterfront landscape with leisure activities, "Stamped into Water", a picturesque path; it not only effectively enhances the landscape's ornamental and vitality but also highlights the local culture and life and enhances the return to nature. Visitors can listen to the most natural sounds and embrace the pure land of the soul. It is a healthy landscape and cultural value that meets spiritual needs ("Figure 7")



Figure 7 Design of Kylin water town.

AUTHORS' CONTRIBUTIONS

This paper is independently completed by Yangzixian Yang.

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