

Design and Implementation of Computer Aided System for Plant Selection in Landscaping

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Abstract

As early as in 2017, the concept of "clear water and green mountains are gold and silver mountains" put forward by General Secretary Xi Jinping has become an important concept guiding China's urban landscape planning. In urban landscape planning, first - and biennial grass flowers are one of the important plant materials in urban greening. Grass flower landscape can not only enhance the effect of land cover, highlight the value and characteristics of herbaceous flowers in landscaping. At the same time, the sustainable development of urban landscape planning is not only reflected in the tangible business products, on the activities of planning and preparation also should pay attention to ecological environment, not blind pursuit of economic efficiency, and coordination of landscape ecology and environment, the relationship between development and resources to build, make the landscape design of the open country sucks more meaningful.

Keywords: Landscape Planning, Meadowsweet Grass, Landscaping, Urban Greening;

1. Introduction

According to historical materials and folk notes, merchants, literati and craftsmen in Shandong province often went to Jiangsu and Zhejiang to do business, study and meet friends. The integration of grass flowers in open fields and urban gardens also has a long history, and urban garden planning is a typical integration result^[1-3]. Planning and design come from the human mind, good wisdom comes from brainstorming. The design characteristics and effects of urban garden planning are derived from the experiences and reflections of the merchants, literati and artisans in the past dynasties who communicated with each other^[4-6].

2. Concept and understanding of landscape design

In the design of urban landscape planning, the author found that its planning and design is a combination of open grass and landscape planning, is the representative of Weifang city, Shandong Province.

As an industry relying on garden resources and the construction of local characteristics, the sustainable development of open field grass flowers is based on the continuous utilization of garden resources, at the same time, sustainable economic benefits can be obtained to meet the needs of further ecological protection. Landscape design can not destroy the garden resources and living environment on the basis of the number of landscape design and the benefits of accurate grasp. And only realize the efficient utilization of landscape resources, to combine economy and resources and overall arrangement, promote the development of garden related agricultural and sideline products, the sustainable development of the landscape is not only reflected in the tangible business products, on the activities of planning and preparation also should pay attention to ecological environment, not blind pursuit of economic efficiency, and coordination of landscape ecology and environment, the relationship between development and resources to build, make the

landscape design of the open country sucks more meaningful.

3. The role of open grass flowers in landscaping

3.1. Characteristics of open grass flowers

Open field grass flower refers to herbaceous flowers, including one-year, biennial and perennial grass flower, which is an important plant material for landscaping design in China at present. The characteristics of open field flowers and plants lie in the variety of grass and flowers, higher reproduction coefficient, more beautiful colors, etc., which mainly play the role of landscape making in urban garden planning and are commonly used to arrange flower tables, flower beds and artistic flower borders (as shown in Figure 1 below).



Figure 1.An example of open field grass flower landscape in Changde, Hunan Province.

As shown in the figure 1 above, the landscape design of grass and flowers on the open ground generally has a relatively good ornamental value and decorative effect, which can not only enhance the effect of garden surface coverage, but also beautify urban garden design, improve the overall image and status of urban garden planning, so as to make residents happy physically and psychologically.

3.2. The role of open garden plants in landscape planning

When analyzing the characteristics of grass flowers in open fields, the first thing we should do is to

develop the society, ecology, economy and technology as a whole in a healthy way, so as to realize the overall sustainable development. Only with the coordinated development of society, ecology, technology and economy as the foundation, can the sustainable development of landscape architecture be guaranteed. The former is the foundation of landscape development, while the latter is the guarantee for the transformation and development of open field grass flowers. Only through adjustment and improvement can the behavior of ecological destruction be effectively reduced, so as to improve the economic level and obtain more financial support for the construction of open field grass flowers.

Domestic outdoor sucks more various elements of landscape design can fusion, improve the system of landscape design industry talents construction, and through the innovative talent management system to further improve the emergency resources deployment mechanism established, at the same time establish and improve the domestic big data platform construction management landscape design industry management system, enhance the corresponding safety skills training, designers strive to work for the development of resource security.

4. Problems existing in urban landscape planning and development

4.1. Persistent imbalance between economic sustainability and ecological sustainability

From the perspective of the resources of grass and flowers on the open ground, the development of traditional garden construction is to directly connect resources or products to customers and guide tourists to play by selling or other forms. And open country sucks landscape design is on the way to the overall improvement, its resources for the whole garden, a more humane considering the landscape resources of compatibility and tolerance ability, in the case of landscape resources can take longer to carry on the corresponding ecological tourism resources can effectively protect gardens, so the development of landscape design realized the virtuous circle of the

landscape resources to further the implementation of the sustainable development of gardens. The landscape design of open grass flower focuses on ecological protection and planning, which can also bring greater ecological benefits to the human masses. From the perspective of ecological protection and tourism development, the landscape design of open grass flowers can help the garden get rid of its traditional resource crisis and alleviate the economic problems of the garden.

4.2. Influence of traditional management philosophy

As the city landscape construction in urban landscape planning application for many years, the city landscape planning gradually established a city landscape construction of landscape construction to improve archives, including for city landscape construction of open quality, the category and so on all the tags, and timely feedback to urban landscape planning and construction to improve the management of design, then at a higher efficiency of city landscape construction to get more attention, from the grassroots employees to management to keep learning and improve their own ability, help to improve the whole quality of China's urban landscape planning and design. The improvement of urban landscape design enables the traditional urban landscape builders to realize the importance of continuous learning and development, and promotes the overall atmosphere of urban landscape planning and design to be more than learning than catching up. Only by pursuing a higher level, urban landscape planning and design can further obtain the advantages of sustainable development and keep the state of long-term success. In addition, urban landscape planning and design can assist urban landscape planning and design to establish more credible and accessible goals, and through comparative analysis to constantly find new goals, strong operability.

4.3. Influence of ecological concept on sustainable development of landscape architecture

Along with the rapid development of information technology in the new period, a variety of Internet technology innovation and development also arises at

the historic moment, but there is no denying that in the urban landscape planning design also combines the broad scope of work, flexible operability and more complex task features, such as the application of interactive media design based on the concept of ecology, it can be more effective to provide tourists video, images, voice, people are more popular way to communicate information, transfer the visitors' mood. In the process of most urban landscape planning and construction management, it is simply to review and calculate according to the system issued by the superior to find the best way. However, the overall work is superficial and only for the purpose of completing the task, which is unfavorable for promoting the development of urban landscape planning and construction management level. This is also the reason why the urban landscape planning and construction management of China's current landscape construction is relatively primary.

5. Application of open field grass flowers in urban landscape planning development

5.1. Realize the virtuous cycle and sustainable management of grass flower resources

The purpose of the integration of grass and flowers in urban landscape planning and landscape planning is to satisfy people's needs and desires for information exchange by satisfying their physical and mental pleasure, social recognition and higher spiritual needs. However, in the actual urban landscape planning and construction management, the strategic objectives of the working system are too single in the development, and such a single system is a limitation to the urban landscape planning and construction management and development. At present, most of the urban landscape planning and construction management only works on the target direction selected according to the national requirements, and there is a lack of management and participation in innovation. Therefore, the overall vision should be expanded to achieve a virtuous cycle.

5.2. Attach importance to the cultivation of domestic varieties and advocate the cultivation of flower border

From the perspective of the whole country, the improved design of urban landscape planning breaks the constraints of many rules and regulations, and has more guiding significance for urban landscape planning and design. The core of urban landscape planning and design also lies in the fact that urban landscape planning and design needs to improve products, services and work flow according to clear indicators and standards, so as to enhance the core competitiveness of urban landscape planning and design through the realization of established standards. In the design of urban garden planning, the continuous selection of different kinds of garden construction design within the same building can effectively integrate the open-field grass flowers with the urban garden (as shown in Figure 2 below).



Figure 2. Application of various open garden plants in urban landscape planning.

5.3. Sustainable development of grass and flowers and three-dimensional cultivation

The body of the urban landscape planning and construction to improve design process USES is "open flowers habitat + flower bed" city landscape planning and design, the urban landscape planning and design facilities have high efficiency, based on intelligent environmental protection platform, and established a three-dimensional planting, automatic control and detection system regional urban landscape construction to improve the pollution content. The improvement design of urban garden

construction represents that the improvement of the factory's urban garden construction can realize that personnel inspection and maintenance are not required when the equipment is in normal operation, and the intelligent operation system in the improved design system will respond quickly and overhaul once there is a problem.

6. Design of computer aided system for landscape plant selection

As an industry relying on garden resources and landscape construction with local characteristics, the sustainable development is based on the continuous utilization of garden resources, and at the same time obtain sustainable economic benefits to meet the needs of further ecological protection. In urban landscape planning, the purpose of the integration of grass and flowers on the open ground and landscape planning is to meet people's needs and desires for information exchange by meeting their physical and mental pleasure, social recognition and higher spiritual needs, which has a significant impact on China's landscape construction and development.



Figure 3. Computer-aided design for landscaping. As shown in Figure 3, the study on optimization of urban green space management is an extension and deepening of China's problems in urban landscape construction. China's traditional urban green space system planning is mainly derived from natural landscape gardens with a very simple and elegant style, but China's urban green space system planning method is very novel, relatively profound artistic conception, known as the mother of the world garden. With the development of The Times, green space system planning from the perspective of urban landscape construction stands out with a brand new

style, and it bears the long cultural heritage of Our country. Based on the urban green space system planning and design techniques and landscaping skills, this paper puts forward feasible Suggestions for urban landscape construction for readers' reference.

6.1. Development trend of urban landscape green space

The construction of urban green space system is generally uneven, but it is distributed according to the situation of landscape and pollution, and evenly distributed in dot green space and belt green space, which has relatively important ecological value. Such urban landscape green space can effectively play a collaborative role in landscape penetration, storage and recycling. And because different types of urban green space can promote the improvement of urban landscape architecture layout, the planning stage can coordinate and optimize the construction.

The rapid development of urbanization leads to the destruction of the natural water cycle. Urban green space itself can play an effective role in the regulation of urban landscape, which also has a great impact on the systematic planning of landscape. Realizing the structural layout network that the system responds to the urban garden system as a whole can minimize the impact brought by the basic treatment of the landscape, and solve the problem of urban landscape jointly with the urban landscape management system (as shown in Figure 4 below).The characteristics of urban landscape green space mainly lies in the realization of landscape control through a series of ways to restore the natural ecological cycle process.



Figure4. Typical urban landscape green space design.

In addition, China's urban green space system planning has always enjoyed a high reputation in the world, and the natural landscape garden with optimal management of urban green space, as one of the garden landscape green space arts, is also connected with China's long literature and art, and has a long history of development. In this respect, the design of urban green space in the real landscape project of urban green space system planning in China is also influenced by the freehand landscape feature in the Tang and Song dynasties, and also reflects very rich cultural connotation in the construction of green space model project of real estate garden landscape.

6.2. Characteristics of urban green space system construction management in China

From the perspective of concept and application effect, the urban green space management reality project is more like an improvement based on the traditional urban green space system planning, by superimposing neoclassical elements and elements with the current urban green space system planning style, and assimilating the traditional culture as a whole. China's urban green space system planning real scene project is also characterized by the combination of Chinese elements and modern materials, the preservation of the traditional charm of gardening, and the more flexible use of urban green space gardening techniques, so that the traditional art in the contemporary society more appropriate embodiment.

For the development of the urban green space, should give full consideration to the regional feature of design, and in the local characteristic park as female parent and inspiration of creation to collect to absorb the essence of traditional urban green space, the classical landscape green space technique and modern landscape green space, adjust measures to local conditions to create a modern residential local sample is obtained with the regional characteristic, and at the same time the development of the real estate industry in our country and developing new

chapter of creating garden residential area, and through the for flexible use of space, color, plants, the overall performance of urban green space low-key implicative, quiet beautiful artistic conception.

6.3. Optimal application of urban green space management in urban green space system planning

In landscape green space landscape design can be bold in reference with the characteristic of traditional plants, such as bamboo, the plum, bamboo in different environment can show a different artistic conception, and can make traditional garden and modern landscape green space for a perfect fit, in the current western architectural features of the widely circulated in the sample project of real estate development and has the unique function (as shown in figure 5), and give people a new visual effect for the interpretation of Chinese style garden landscape, let people know again and deep feelings of traditional urban green space system planning.



Figure 5. Influence of computer-based Western gardens on urban green space planning (Design Concept Map).

In addition, in terms of the spatial layout of urban green space, we can learn from the architectural style of local gardens and adopt different courtyard composition methods to arrange the space of real estate residential areas, so as to rationally design the layout of open and private Spaces in the residential areas and meet the needs of owners at different spatial levels. At the same time, it can also express large space in small places as far as possible through the

processing of series of leakage scenes, framed scenes and scenes. Through the flexible use of the design characteristics of different parks, the treatment of the real estate sample project should also draw lessons from a variety of theme landscape interpretation. On the expression of colour also ought to pay attention to and the confluence of surroundings, contrast, undertake whole permeate through multicolor series and colorless series. In the expression of colors, the park should also reflect the rich and profound southern customs, so that people living in the park can get peace of mind.

7. Conclusion

As one of the representative arts of landscape green space, urban green space system planning real scene project is connected with the long literature and art of Our country, and has a long history of development. The urban green space can effectively control the urban landscape runoff and recycle the landscape through the flexible application of the urban green space gardening technology. For scenery, scenery box and overlook the attention of the multi-level space organization, and in terms of eye opening and closing, the use of modern materials for interpretation of classic lasting appeal to all aspects, on the plant disposition also has more far-reaching implication, for cities to realize echo of overall system structure and layout of city landscape system network can maximize reduce the effects of landscape foundation treatment. These are the essence of the urban green space to carry forward, reflects the aesthetic implication, delicate plain characteristics.

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