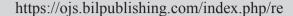


#### Research in Ecology





#### **ARTICLE**

### Analysis on Landscape Ecological Design in Landscape Architecture

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#### **ABSTRACT**

With the continuous improvement of China's economic level, the people's cultural literacy is gradually increasing, and the same people are increasingly pursuing new changes and changes in the quality of life. At present, most people are not only satisfied with the basic needs of life. but also have a new height and pursuit in the improvement of new life quality. In the current landscape design field, people are increasingly demanding landscape design. How to design urban landscape design that meets the real needs of people under current social conditions is one of the hottest topics in the current landscape design industry. As an important component in the construction of landscape architecture, effective landscape ecological design plays an important role in maintaining the sustainable development of urban ecological environment and enhancing the visual beauty of landscape architecture. Therefore, it is necessary to pay more attention to the ecological design of the landscape, clarify the ideas and principles of ecological design, and realize the improvement of the safety and aesthetics of the landscape ecological design in the construction of landscape architecture. Then, this paper gives a brief overview and analysis of some design concepts, design principles and design points in landscape ecological design in current landscape architecture, which aims to promote the quality improvement of the landscape ecological design in the current Landscape architecture and promote the progress and development of the overall landscape ecological design industry.

#### 1. Introduction

here are interactions and interactions between people and the natural environment, especially in the process of landscape design and planning. At present, landscape design and planning is a living environment discipline with ecological balance and strong aesthetics based on social factors, ecological factors and human factors. In recent years, people have continuously increased the quality and requirements of urbanization construction, and have high demand for urban greening,

which has increased the related construction of landscape architecture in urbanization construction. In the urbanization construction, the Landscape architecture construction can provide a good outdoor play place for urban residents, satisfying the residents' life and entertainment needs. On this basis, the construction of landscape architecture has also increased the green area of the city, contributed to the improvement of the urban environment, and promoted the urbanization construction into a new stage.

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# 2. The Overview of Landscape Architecture and Its Landscape Ecological Design

#### 2.1 The Concept of Landscape

Although China's landscape architecture has a very long history, in terms of the development of modern landscapes, the introduction of landscape as a concept is the American ecologist Steiner. As far as the current wide-ranging cognition is concerned, landscape refers to the sum that people can feel through their own vision. It is the fusion and superposition of the culture and time of the building site, which is a design and planning work formed by human beings through the mutual cooperation and carving of the current culture and nature<sup>[1]</sup>. As far as the definition of landscape is concerned, there are many types of landscape elements. The most extensive components of the current landscape include mountains, buildings, water bodies, forests, fields, deserts and human habitats. According to relevant scholars and corresponding research, it can be concluded that the landscape is a combination of objects in space to some extent<sup>[2]</sup>.

### 2.2 The Concepts Related to Landscape Architecture

With the continuous improvement of people's material life and spiritual needs, the concept of the corresponding Landscape architecture is gradually becoming well known. According to relevant research, China's landscape architecture has a very long history, and the landscape-related buildings also have a very large number. However, in terms of the development of modern landscape architecture, the concept of landscape architecture has a more scientific and broad consensus. Landscape architecture is an activity that combines the design of landscape with the planning, management, improvement and protection of landscapes and restoration, and a series of activities around the landscape<sup>[3]</sup>. Landscape architecture is more focused on man-made activities, which is a comprehensive cultural embodiment that combines science, art, aesthetics and nature.

#### 2.3 The Concept of Landscape Ecological Design

In the process of modern and contemporary history, the development of landscape ecological design is very rapid. But in the early days of urbanization, many countries do not pay attention to the balance between ecological environment and urban construction. In many cases, economic development is based on the destruction of the natural environment. In recent years, with the continuous improvement of people's living

standards, environmental protection concepts such as landscape ecological design and harmonious coexistence between man and nature have been continuously raised. Landscape ecological design has witnessed the joint efforts of the modern international community and was proposed in the study of the "human and natural biosphere". The ultimate goal of landscape design is based on the natural ecological strength, the natural ecological design of Landscape architecture, and the reduction of artificial design as much as possible to meet the urban development needs<sup>[4]</sup>.

#### 3. Related Ideas on Landscape Ecological Design

#### 3.1 The Idea of Ecological Restoration

With the continuous advancement of human science and technology and the continuous development of society, people have made great progress in various fields such as industrial production and scientific development. However, in terms of current social development, many human activities and social development are based on the destruction of our natural environment. In order to effectively restore the ecological environment, in the current landscape ecological design process, it is necessary to promote the sustainable development and evolution of the ecological environment, and give the landscape ecological design system self-regulation ability, thus achieving the initial destruction of the ecosystem self-repair and self-regulation<sup>[5]</sup>.

### 3.2 The Idea of Ecological Protection and Compensation

As far as the current situation of landscape design and planning is concerned, there is lots of Landscape architecture that consumes a lot of natural resources. On this basis, in the actual design process, landscape architects need to base on the actual situation, adhere to the concept of ecological protection for rational design, and adopt the design scheme with the lowest impact on the ecological environment for landscape architecture planning. Moreover, in the actual landscape ecological design, it is also necessary to formulate a scientific and rational environmental protection plan based on the actual ecological situation, so as to achieve the lowest loss of natural resources and energy. In addition, with the development of new energy technologies, the application of wind energy and solar energy in current landscape design can be enhanced, thereby reducing the energy consumption of landscape design and promoting the sustainable development of the ecological environment.

# 4. The Principles of Landscape ecological Design

### 4.1 The Ecological Principle of Landscape Ecological Design

The most basic principle of landscape ecological design is its ecological principle. It can be said that ecological principle is the most necessary principle in all principles of landscape ecological design. Nowadays, with the gradual strengthening of social civilization, the protection of the ecological environment is not only the protection of nature, but also the protection of people themselves. In today's social cities, there are more and more people's activities in the world and countless cities are being built. Landscape ecological design is undoubtedly an important direction for future urban development<sup>[6]</sup>. The ecological principle of landscape ecological design is to compensate for the damage caused by human urban construction through corresponding means, and to improve the natural environment of the city through reasonable ways to increase the natural environment of the city itself.

### 4.2 The Stability Principle of Landscape Ecological Design

Landscape ecological design needs to be considered from the overall stability. The stability here means that we should maintain stability in the ecological design of the landscape, avoid and reduce the interference and destruction of our landscape ecology by various external factors. In the process of planning, not only to achieve people's purposes, to protect the natural environment, but also to ensure that such landscape ecology can be recycled, it is necessary to pay attention to the stability principle in planning and design<sup>[7]</sup>.

### 4.3 The Economy Principle of Landscape Ecological Design

As we all know, any planning not only includes the design of landscape ecology, but also considers the economic cost. The same landscape ecology planning and design also needs to follow the principle of economy. In the design of the entire ecological environment, it is necessary to calculate the input-output ratio, and to achieve the maximum output with the minimum investment. The point to note here is that not all small inputs and large outputs are suitable. Here, people need to be based on each other. That is to say, the design must first meet the actual needs and purposes of the people. Under such preconditions, the construction investment should be reduced as much as possible to achieve the economic principle of planning

and design, so as to maximize its benefits.

# 5. Application Countermeasures of Landscape Ecological Design in Landscape Architecture

### 5.1 Focus on the Full Integration of Landscape Design and Local Resources

In order to better play the important role of landscape design in the current landscape construction and promote the advancement of landscape ecological design, we need to integrate the current landscape design with local resources. The integration of landscape design and local resources here mainly refers to the integration of design in the landscape design, more in integration with local elements, such as the integration of local plant, landscape, terrain and other elements. Native plants mainly refer to the longterm natural selection and species succession. The natural flora of a particular region with high ecological adaptability is the most suitable for the local large-scale ecological environment [8]. The advantage of landscape design in Landscape architecture combined with native plants and resources is that native plants can adapt to local environmental changes in landscape ecological design without damaging the local ecological environment, which has less impact on the local ecological environment, and on this basis, it can also reduce the corresponding cost input.

### **5.2** Landscape Design Needs to Pay Attention to the Process of Natural Evolution

As a landscape architect, you should try to maintain the original natural features of landscape design, such as spring water, creeks, and the shape of the tree itself. For famous trees, topography, etc., these are the understanding and respect for the intrinsic value of nature<sup>[9]</sup>. On this basis, not only can the cost of investment be reduced, but also the excessive aesthetic pursuit of form can be effectively avoided, thus causing irreparable damage to the original ecosystem. From this perspective, the landscape ecological design process in landscape design should actively follow the laws of natural evolution, rather than blindly destroying<sup>[10]</sup>.

#### 6. Conclusion

In summary, with the continuous development of people's society and economy, the demand for landscape architecture construction and landscape ecological design has also increased. On this basis, we need to pay attention to the related work of landscape ecological design in landscape architecture, and carry out corresponding landscape

design activities according to the ecological principle, stability principle and economy principle related to land-scape design. Moreover, it is necessary to carry out the corresponding landscape ecological design work with the idea of ecological restoration and ecological protection. In the actual landscape ecological design of landscape architecture, we also need to pay attention to the process of natural evolution, fully combine landscape design with local resources, and further enhance the level of landscape ecological design in current landscape architecture.

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