

# Research on Landscape Environment Design of Eco-oriented urban Residential Area

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**Abstract.** Environmental problems are getting worse, and the "ecological philosophy" in people's minds has been gradually strengthened. Especially in recent years, people have paid more and more attention to environmental protection. How to establish environmentally friendly and green ecological city residential areas has been the subject of much discussion. Under such circumstances, the landscape design of urban settlements also needs to keep pace with the times, adding ecological concepts, and how to better reflect the ecological concepts in urban residential areas is a problem that China needs to focus on. In this article, we will carry out specific research mainly on the landscape design of urban residential areas under the ecological concept.

**Keywords:** Ecological orientation; People oriented; Landscape design.

## 1. Introduction

Residential landscape design as the most direct external performance of the whole modern urban environmental landscape construction, with the development and innovation of urban planning and construction. The environmental landscape design of residential area is the most close to people's life and leisure places, which plays an important role in improving the quality of life and living environment of urban residents. At the same time, as the most common and basic constituent unit of modern city, it also plays a crucial role in the overall urban landscape and urban planning.

The environmental landscape design of residential area is the final foothold of the modern urban planning and construction into the specific design implementation work, and the ecological landscape design is a strong technical guarantee, can effectively improve the effect of the environmental landscape design of residential area, is the best way to solve the environmental problems of urban residential areas. A harmonious and beautiful living environment is not only limited to the existence of buildings and the construction of landscape, but also to achieve the overall optimization of the living environment, to promote the coordination of the ecological environment, to achieve the "social people" in the social and cultural environment to meet a variety of conditions, that is, the human environment.

The landscape design of early residential areas is often dominated by simple "gardening", which is just an accessory of architectural design. Nowadays, with the progress of science and the development of the society, the development of modern city construction process faster and faster, people's material and cultural life level has been in business, we not only to the residential building itself, especially in residential environment increasingly attach importance to the ecological balance and environment condition of the is a new trend of development of the modern urban residential environment landscape.

## 2. Ecological Concept of urban Residential Landscape Design

### 2.1 Keep Harmony with the Natural Environment

With the increasing demand on the quality of life and the pursuit of low-carbon life, people also have a very important consideration on the environment around their residential areas when purchasing houses. Therefore, in the process of building, in addition to the design requirements of the building itself, the environmental design around the building should also be very important. In the design of residential landscape, we should grasp the integration of landscape design and natural environment, maintain the harmony with nature, improve people's living environment, bring people

the most natural and environmental protection, high-quality living environment, but also highlight the ecological concept.

## **2.2 Maintain the Balance of the Ecosystem**

The urban living environment is a part of the ecosystem, and the residential landscape system is also relative to the ecosystem, which has a great development. However, in the development of residential landscape, we should pay attention to maintain the balance of ecological environment. The construction of residential areas and the process of environmental development will have a great impact on the ecological environment, and will cause damage to the surrounding green plants and organisms. Once there is a problem in the biological structure of the ecosystem, its own restoration activities cannot be restored, the biological structure of the whole region will appear in this way and that problem. In order for all the functions in the whole system to work normally, it is necessary to ensure that the components of the system remain normal. Therefore, the balance between the whole landscape system and the ecosystem should be ensured in the process of landscape design of the residential area to ensure the normal of the ecosystem.

## **2.3 Richness of Landscape System**

At present, there is a common problem in the residential landscape system in China, that is, the landscape design institution is too single, and people living in this environment cannot enjoy the real benefits brought by the landscape design. In other words, the real function of landscape design cannot be realized. There are three main reasons affecting the current landscape design structure in China. One is that the design area makes the structure of the landscape unable to be complex and deep, which restricts the landscape design to some extent. Secondly, in the current urban residential area, most of the land area is covered by buildings. In order to maximize the economic benefits, real estate enterprises make use of land to build houses. Therefore, the landscape in the residential area is basically dominated by buildings, which results in the simplicity of the landscape structure. Thirdly, most of the residential environment is covered by buildings and highways, and the landscape design is restricted to a certain extent.

# **3. Landscape Design Principles of urban Residential Area based on Landscape Ecology**

## **3.1 Integrity Principle**

In the process of design, attention should be paid to the coordination and integration of the overall landscape with the spatial layout and cultural background of the whole city, so that the landscape system of urban residential areas has full applicability, cultural inheritance and appreciability.

## **3.2 Maintain a Certain Ecological Effect**

The living environment of human beings is a part of the ecosystem, and maintaining the ecological balance is of great significance to the development of human beings and nature. In the whole ecological system, only to maintain the harmony between man and nature, to maintain the balance with the whole ecosystem, can we achieve sustainable development.

## **3.3 Community Diversity Principle**

People are social animals, and their own needs are also diverse. Coupled with the relative shortage of land resources, it is necessary to maximize the use of land resources. In the process of residential landscape design, maintaining the diversity of community functions plays a very important role in human life.

## **4. Landscape Design of urban Residential Area based on Landscape Ecology**

### **4.1 Layout of Residential Landscape**

Scientific and reasonable landscape design can effectively improve the living environment. In the city, there are many residential areas, which are distributed in all corners and regions of the city. These residential areas form large and small plates, which together form a big plate -- the city. Therefore, in the process of landscape design for the residential area, these plates should be divided, according to the reasonable layout of different plates, so that the whole plate forms a complete system. During the process of plate design, it should be noted that the plates of a certain system should have green Spaces, rivers and ecological gardens, and these should be connected by means of design to form a complete "ecosystem". At the same time, in the process of design, the green space and building land should be accurately considered, and the design scale should be strictly controlled, so that the landscape system can be implemented and reasonable. In addition, public green space should be added between the roads in the residential area, making it the core of the whole landscape. The green space system should also have abundant levels to innovate the landscape design and highlight the novelty of the landscape.

### **4.2 Residential Landscape Design**

In the process of landscape design, the first thing to be clear is the structure of the landscape elements, after the clear elements of the landscape system can be reasonable design, to meet the needs of landscape design. Mountains, rivers, land grasses, forests and so on are the most basic natural elements, which are also the main components in the landscape system. In the process of landscape design, these natural elements can be used to improve and set off the living environment.

### **4.3 An Excellent Landscape Design can Make People have a Good Visual Enjoyment**

In the process of landscape design, the elements in the landscape should be designed reasonably and adequately. In the design of the edge of the building, to maximize the use of the edge area, appropriately increase the length of the edge. When choosing to plant plants, we should also pay attention to the expression of spatial hierarchy to improve the visual effect. At the same time, the water source design of the residential area also has a very important impact on the whole landscape system. It is necessary to design the pattern of the whole landscape system reasonably, transport the treated water source to the place where it is needed, and increase the utilization rate of water resources.

## **5. Ecological Design of Landscape**

With the progress of science and the development of the society, the development of modern city construction process faster and faster, people's material and cultural life level has been improved, we not only to the residential building itself, especially in residential environment increasingly attach importance to the ecological balance and environment condition of the is a new trend of development of the modern urban residential environment landscape.

During this period, the domestic garden design thought also entered a new active period. Residential landscape design concept is also in constant innovation. It includes the establishment of the theme of landscape design, the expansion of the scope of design, the richness of design methods and the integration of "people-oriented" and ecological design ideas, etc. Residential landscape design has become an independent research topic.

Nowadays, the strengthening of environmental awareness leads to the change of people's values of choosing to live, coupled with the strengthening of market competition, real estate developers have to pay attention to the design of residential landscape environment, high-grade landscape design has become the main selling point. The design concept of "ecology" and "people-oriented" has been paid more and more attention. More and more investment has been made in the environmental construction of residential areas, and the ecological design of residential environment landscape has

been carried out by developers at great expense. The architectural style and landscape design elements tend to be diversified.

Therefore, in order to meet the development requirements of sustainable and economical society, it is imperative to carry out ecological landscape design of modern urban residential area. The progress of society develops steadily with the prosperity of economy and the improvement of people's living environment is also an important symbol of the progress and development of modern society. In the context of building a sustainable and economical society, ecological design of residential landscape must also be carried out. Therefore, eco-oriented design has become an eternal theme of landscape development in modern urban residential areas.

In the future, the development direction of urban residential landscape may be more ecological and natural and suitable for the needs of people. It may use more advanced ecological technology and garden technology to make our landscape environment more scientific and reasonable. Its landscape can make people use and feel relaxed and comfortable at the same time, give people a warm harbor on the body and mind, and improve people's quality of life. The most important thing that the landscape environment of modern residential area emphasizes is its ecology. Nature looks like from the birth of life from that moment on with people have an indissoluble bond, close to nature is of course also human nature and nature. The construction of the landscape as a living state can arouse the residents' good feelings towards the nature and place them in it. The best landscape environment has a certain virtuous ecological cycle and material cycle. It follows the natural law of sustainable development and achieves both scientific and beautiful and comfortable.

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