

Research on the Principle of Old House Reconstruction in Residential Design

Zhengwei Fu

Chongqing Nan'an District Housing and Urban Rural Development Committee, Chongqing 401336 China

Abstract: In view of the building groups of some old houses, these houses need to be transformed and upgraded, which can achieve the design effect of new houses and save a lot of human, material and financial resources. In residential design, the transformation of old houses is a common content and project. It is necessary to clarify the basic principles of the transformation of old houses and understand the problems in the transformation design, so as to improve the quality of the transformation of old houses.

Keywords: Residential Design; Reconstruction of Old Buildings; Principle

Introduction

Old houses refer to a class of housing construction groups that have been built for many years with relatively old internal facilities and gradually aging structures. Basically, the functions of houses can no longer meet the living needs of modern residents. If the old houses can not be reconstructed and designed in time, more house collapses may occur, which will also have a serious impact on people's normal life. It is of great significance and value to improve the living effect of old houses through space design, overall design, internal structure design, etc.

1. Overview of Old House Reconstruction Design

The transformation of old houses is to transform the original residential area, integrate the modern residential area into the modern residential area, improve the living environment and enhance the residential value. The transformation of old houses is not simply to reinforce and renovate the old buildings, but to design the old houses completely and make them become a new community that can not only reduce resource waste, but also realize resource recovery and regeneration. In the reconstruction of old houses, landscape design is undoubtedly the most important. With the improvement of modern residents' living standards, the requirements for the living environment are getting higher and higher. The landscape of residential areas can no longer meet people's needs. Moreover, after a long period of living and use, most of the greening and infrastructure have been destroyed, which is in urgent need of reconstruction.

In the early planning stage, the old houses should be updated and designed to preserve the memory of history and culture. As the soul of a city, old houses can reflect the cultural heritage and spiritual quality of a city. We should promote the renewal of old urban areas from the perspective of overall urban development. With scientific planning, we can create old houses with special charm, and with efficient design management, we can create a new look of the city.

2. Problems and Causes in the Reconstruction of Old Houses

2.1 The original space layout of the old house is unreasonable

The space layout and utilization of many old houses are inconvenient because the houses were built earlier and the space planning is not reasonable. For example, indoors, most of the old houses design the living room as a very small room, while the bedroom and kitchen are relatively large, so the space cannot be used well. In the internal space design process of some old houses, the rationality of space is not considered. The large place is not large, and the small place is not small, which is easy to cause a large waste of space resources. In particular, the interior design does not take into account the storage design,

which may cause a lot of debris piled together due to a long living time, and there is no suitable space to place debris, which will make the interior of the house very messy. Some old houses neglect the planning and design of dry and wet areas, which is prone to serious damp in living rooms and bedrooms. The overall design layout of the house is unreasonable, which will also have a certain impact on the safety of the residents.

Because the old houses were built for a long time, it is possible that when the houses were built at that time, the internal waterway and circuit layout were very chaotic, and some old houses still had electric leakage and water leakage, so there was no reasonable drainage system. The sewage used by residents has not been properly treated and will be directly discharged into the sewer, which will have a serious impact on the surrounding environment. Even the residents of older old houses in some areas directly dig wells in their own houses and directly draw groundwater, which is not compliant. Based on the analysis of the circuit, it is found that most of the old houses have potential safety problems of the circuit. After years of use, the circuit has been aged without timely replacement of wires, and there will be many safety accidents such as electric shock and fire. In addition, some residents of old houses feel that there is insufficient space in their living process, so some residents choose to build floors by themselves. Such illegal buildings have not been designed by professionals or approved by relevant departments, which may lead to unreasonable problems in the building structure, damage the original load-bearing structure, and cause greater potential safety hazards.

2.2 Relationship between residential satisfaction and surrounding environment

Most of the old houses are located in the old city and the surrounding areas. Because of their own particularity, most of the urban planning and construction are very difficult. Around the old housing area, due to the lack of large shopping supermarkets, parks, schools, etc., there are problems such as inconvenient transportation, backward supporting facilities, and insufficient green space. There is basically no unified property company in the old housing area. The environmental problems have not been solved well. There are a lot of garbage piled up, and no one has dealt with them for a long time. The location of the old house is low and the drainage system is poor, so many houses will be flooded, especially when it rains. It is easy to have water accumulation

3. Discussion on the Principle of Old House Reconstruction

3.1 Basic principles of green buildings

The principle of green design needs to take into account the reduction of environmental pollution and energy consumption caused by the design, as well as the recycling or reuse of products and parts. The design concept of environmental protection is not limited to industrial design, but also includes other designs. In the reconstruction design of old buildings, we should adhere to the principle of environmental protection. At the same time, we should try to reduce the pollution to the environment, make rational use of construction waste, achieve sustainable development, try to choose environmentally friendly and energy-saving materials, and try not to excessively decorate or waste materials. In fact, green design is an energy-saving architectural design based on the design concept of protecting and saving resources. This architectural design emphasizes less energy and resources, "About energy and resources and protecting the environment. A new type of building with the basic design concept of energy conservation, water conservation, land conservation, pollution reduction and energy consumption, it places environmental protection in the position of advancing the process of human civilization at the same time, and takes the improvement of living quality and living comfort as the ultimate goal. In addition to meeting human living needs, creating environmental comfort and improving the quality of social life, it also emphasizes people-oriented, human and self However, harmonious coexistence emphasizes the harmonious coexistence of architecture, landscape and natural environment, and the coordinated development of construction and ecological environment.

The traditional residential reconstruction design should not only achieve the goals of energy saving, water saving, land saving, material saving, reduction of pollution and energy consumption, improvement of land use efficiency and energy saving and consumption reduction in the building structure, but also must always implement the concept of energy saving and water saving in the building function, design and construction process. The transformation of old houses should also follow the basic principles of green design to protect the environment and the safety of building structures to achieve sustainable economic and social development. Green building design is a process of design and practice based on the current problems and threats to human living environment, which can effectively solve various environmental and architectural design problems; When solving environmental and architectural problems, it can also ensure that the architectural design process is consistent with people's living environment.

3.2 Principle of maximum utilization

In the reconstruction of old urban areas, attention should be paid to the rational allocation of space resources of existing buildings to maximize the use of existing space. In terms of space, the reception area, rest area, bathroom area, storage area, entertainment area, work area, etc. of the house should be considered according to the specific environment. Pay attention to ventilation and ventilation when zoning, and the dry and wet areas should be clear. In the transformation of small area old style residence, due to the limited space, try to make use of one piece as much as possible. Make full use of the hidden places such as the furniture and walls, which increases the storage and storage capacity. To some extent, it is also an effective space configuration to consider more details.

The design and transformation of old houses should follow the principle of maximum utilization of space. In the traditional design and transformation of old houses, the order of urgency first and then slowness is generally followed. Because the houses are old, many people do not really understand the problems existing in the houses, but only see the appearance of some houses. The principle of maximum utilization of space shall be followed when the house is reconstructed. If the demolition will lead to the reduction of indoor space, the original house pattern will appear crowded. Therefore, the principle of maximum utilization of space should be followed during construction. When demolishing old houses, the load-bearing walls can be demolished or removed as a whole, and then the indoor space layout can be re planned and designed according to the house type.

3.3 Principles of cultural protection

The historical and cultural backgrounds of different parts of China are different. Therefore, when carrying out the transformation of old buildings, we must fully consider the influence of humanistic factors, while maintaining the local style and features, and at the same time developing diversified cultures. Every city and region has its own characteristics. The ancient buildings are also the characteristics of a city. The cultural development of a city is a witness, and the development of a city cannot be obliterated. We must carry out reasonable inheritance and development of cultural characteristics in an overall cultural environment. While enjoying modernization, we will not deviate from the original culture, and may form a different landscape.

4. Conclusion

Summarize, strengthen the design and transformation of old houses, improve the city image, and ensure people's normal quality of life. In this process, it is necessary to understand some precautions for the transformation of old buildings and the basic principles of design, so as to meet people's living needs to the greatest extent and reflect the social value of green and environmental protection.

References

- [1] Peng J. Research on design of quick decoration parts for kitchen and bathroom space in old house reconstruction [D]. Central South Forestry University 2021;
- [2] Xie H. Application of assembled decoration design in old house reconstruction [J]. China Housing Facilities 2021; (04): 78-79