

Research on the Design of Public Space Renovation in Old Urban Areas from the Perspective of Urban Renewal

Taking the Surroundings of Yellow Crane Tower as the Example

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ABSTRACT

This article starts from the perspective of urban renewal and takes the old urban areas around the Yellow Crane Tower as the case study objects to explore the relevant issues of public space renovation design in the old urban areas. Based on the current research, this study proposes transformation strategies such as spatial order sorting and reconstruction, ecological and natural transition, etc. Through field research and literature analysis, combined with relevant excellent cases and practical experience, a series of transformation design schemes are proposed. Finally, the feasibility of the transformation strategies is verified through design practice. Through research, it has been found that the design of public space renovation in old urban areas requires comprehensive consideration of various factors such as historical culture, social environment, and urban functions in order to achieve the goal of urban renewal. The renovation and design of the old urban areas around the Yellow Crane Tower aims to improve the overall appearance of the public space in the old urban areas, disperse tourist flow, increase tourist traffic rate, alleviate road traffic pressure, promote sustainable development of public space in the old urban areas, and enhance site utilization.

Keywords: *Urban renewal, Old urban area, Public space renovation design, Surroundings of the Yellow Crane Tower.*

1. INTRODUCTION

With the continuous acceleration of urbanization and the continuous growth of population, the space of cities expands accordingly. The renewal and transformation of old urban areas has become an important issue in urban development. Urban renewal refers to the comprehensive transformation of old urban areas to improve urban quality, enhance urban functions, and improve the living environment. Public space is an important component of urban life, which not only affects people's quality of life, but also reflects urban culture and community spirit. As a famous historical and cultural landmark in China, the protection and renewal of the surrounding area of the Yellow Crane Tower are of great significance for inheriting historical context and protecting cultural heritage. The public space in the old urban

areas is a key and difficult point in urban renewal, and its transformation not only involves historical and cultural protection, urban planning, environmental governance, and other aspects, but also needs to consider the needs of residents and the improvement of urban functions.

2. RESEARCH PURPOSE AND SIGNIFICANCE

2.1 Research Purpose

The purpose of this study is to explore the design of public space renovation in the old urban areas from the perspective of urban renewal, taking the surroundings of the Yellow Crane Tower as an example. By renovating the public space in the old urban areas, the city image, tourist satisfaction, and residents' quality of life can be improved. Specific

goals include: the first is to clarify the focus and direction of renovation by investigating, researching, and analyzing the problems and shortcomings of existing public spaces; the second is to propose practical and feasible renovation design plans by drawing on successful cases both domestically and internationally, including landscape design, functional planning, traffic guidance, and other aspects; the third is to conduct on-site inspections and demonstrations based on actual situations to provide scientifically effective design solutions for urban renewal

2.2 Research Significance

The renovation of public spaces in the old urban areas is an important component of urban renewal, which is of great significance for enhancing the city's image, improving residents' quality of life, promoting cultural inheritance and development. Taking the area around the Yellow Crane Tower as an example, the renovation of public spaces in the old urban areas can effectively enhance the cultural and historical atmosphere of the region, attract more tourists and citizens to visit and play, and thus drive the development of surrounding businesses and economic prosperity. At the same time, the renovated public space will also provide residents with more leisure and entertainment venues, improve the urban living environment, enhance the city's image, and promote communication and interaction among tourists. The research on the design of public space renovation in old urban areas not only plays an important role in promoting urban renewal and public space planning, but also has a positive impact on society, economy, and culture.

3. RELEVANT RESEARCH STATUS IN CHINA AND FOREIGN COUNTRIES

3.1 Current Status of Foreign Research

Many cities abroad face similar urban renewal problems. U.S. cities such as New York, Chicago, and San Francisco have improved their city image and quality of life through projects such as the creation of new ecological parks and city beaches ("Figure 1"). These designs not only provide leisure space, but also improve the living experience of residents, promoting social exchange and cultural activities.

Old-town renovations in European cities such as London, Paris, and Berlin focus on preserving

historical and cultural heritage while incorporating modern design.[1] For example, the renovation of London's King's Cross station square ("Figure 2"), freed up 7,000 m² of space, showcasing the railway station's Victorian façade while reflecting significant changes in the area in recent years.



Figure 1 New York's Pier 35 ecological park and urban beach.

a Figure source: <https://www.goood.cn/>



Figure 2 King's Cross station square in London.

a Figure source: <https://www.goood.cn/>

3.2 Current Status of Chinese Research

The renovation of public space in the old city is the key problem of urban renewal. Chinese scholars have studied the combination of traditional culture and modern urban planning, the preservation of historical buildings, the renewal of public spaces, and community participation and urban renewal management[2]. Take Yongqing Square in Guangzhou for example ("Figure 3"), located on Enning Road in Old Guangzhou, which was once the economic center of South China, and then declined into a slum. After the renovation, the old street was transformed into a cultural tourism area, while improving the surrounding community. The project promotes the symbiosis of old and new residents by dividing streamlined, cultural and

natural node systems (“Figure 4”) to efficiently utilize demolition waste.



Figure 3 Renovation of Yongqing Fang old street block.

a Figure source: <https://www.goood.cn/>

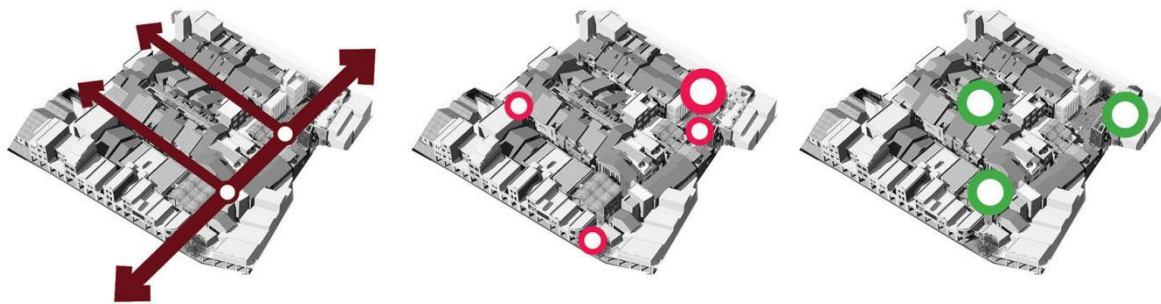


Figure 4 Three systems for the renovation of Yongqingfang old block.

a Figure source: <https://www.goood.cn/>

However, there is still a need for in-depth exploration of specific practical cases and theoretical research on the renovation design of public spaces in the old urban areas surrounding the Yellow Crane Tower. This paper aims to draw on the current research status in China and use the surrounding area of the Yellow Crane Tower as a case study to extract a feasible design scheme from practical operations, in order to provide useful inspiration for the renovation of public spaces in old urban areas.

4. RESEARCH CONTENT AND METHODS

4.1 Research Content

By deeply analyzing the current problems and seeking effective ways to enhance urban renewal

and development, the research content includes investigating and analyzing the current situation of the old urban area around the Yellow Crane Tower, exploring the direction and strategy of public space renovation, and demonstrating feasible renovation plans through case studies. In addition, this study will also combine the perspective of urban renewal to explore how to improve the quality and function of the old urban area on the basis of respecting historical culture, and achieve a positive interaction between urban renewal and traditional culture.[3]

4.2 Research Methods

In the process of researching the renovation and design of public spaces in the old urban area around the Yellow Crane Tower, the researchers will use various research methods such as in-depth interviews, literature research, and on-site investigations. In-depth interviews can provide a

deeper understanding of the needs and expectations of residents and tourists for public spaces, literature research methods can provide insights into the history and current status of relevant issues, while on-site investigations can provide a visual understanding of the actual situation and existing problems in old urban areas. By comprehensively applying these methods, the researchers will be able to gain a comprehensive and in-depth understanding of the current situation and renovation needs of the public spaces in the old urban area around the Yellow Crane Tower, providing strong support for subsequent designs. The researchers will also draw on successful cases at home and abroad, combine local culture and regional characteristics, summarize a set of design methods suitable for the renovation of public spaces in the old urban area around the Yellow Crane Tower, and provide feasible suggestions for practical operations.

5. RELATED CONCEPTS AND THEORETICAL RESEARCH

5.1 Related Concepts

5.1.1 Old Communities

Old communities refer to urban areas that were built earlier, have outdated infrastructure, dirty and chaotic environments, and lagging social functions.[4] These communities often have problems such as congestion, inconvenient transportation, and environmental pollution, resulting in lower quality of life for residents. The renovation of old communities includes updating and improving buildings, roads, public facilities, and other aspects, with the aim of enhancing residents' quality of life and urban image.

In the perspective of urban renewal, the transformation of public spaces in old communities has become particularly important. The public spaces in old communities are important places for urban residents' daily lives, social, leisure, and recreational activities, as well as a window to showcase urban culture and image.[5] Therefore, how to carry out reasonable and practical transformation and design of public spaces in old communities has become an important task in urban planning and construction.

5.1.2 Public Space

Public space is an open space in a city for citizens to use and communicate, with social sharing and democracy. It is not only a place for daily life of urban residents, but also a carrier of urban culture, history, and social memory.[6]

As an iconic scenic spot in Wuhan, the renovation of the public space around the Yellow Crane Tower is particularly important. By re planning and designing the public space around the Yellow Crane Tower, it can improve the viewing experience for tourists, increase leisure and entertainment venues for residents, stimulate the development of surrounding businesses, and promote cultural heritage and innovation.[7]

5.1.3 Humanization

The purpose of urban renewal is to enhance the overall image and living environment of the city,[8] while humanized design prioritizes people's needs and interests, focusing on their life experience and happiness.[9] In urban renewal, humanized design needs to consider people's emotional identification, social interaction, and cultural heritage to improve the sustainability and attractiveness of urban public spaces.

5.2 Related Theoretical Research

5.2.1 Environmental Psychology

Environmental psychology is a discipline that studies the relationship between humans and the environment, playing an important role in urban renewal.[10] Urban renewal projects often involve the re planning and design of public spaces, and environmental psychology can help designers better understand people's perceptions, attitudes, and behaviors towards the environment, thereby better meeting the needs and expectations of the public.

5.2.2 Place Theory

Place theory emphasizes the interaction between people and the environment, believing that people's behavior and emotions are influenced by the environment, and the characteristics of the environment can also affect people's behavior and emotions.[11] In urban renewal and public space renovation in old urban areas, place theory can help designers better understand people's needs and expectations for space, thereby creating more attractive and comfortable public spaces.

Taking the old city area around the Yellow Crane Tower as an example, from the perspective of place theory, designers can deeply explore the needs of local tourists and residents for public space, understand their identification with historical culture and pursuit of modern lifestyle, as well as what problems and inconveniences they think the site currently has, and which areas need improvement. In the design of public space renovation, local cultural elements[12] can also be fully considered and integrated to enhance people's sense of belonging and identity.

5.3 *The Relationship Between Humanization and the Renovation of Public Space in Old Communities*

Humanized design is centered around human needs and experiences, incorporating people's feelings and behavioral habits into the design process to create spaces more suitable for people's activities. In the renovation of public space in old urban areas, humanized design can improve people's satisfaction, increase the vitality of public space, and improve the environment of public space in old urban areas.[13]

6. RESEARCH ON THE CURRENT SITUATION OF PUBLIC SPACE IN THE OLD URBAN AREAS SURROUNDING THE YELLOW CRANE TOWER

6.1 *The Historical Origins of the Old Urban Areas Surrounding the Yellow Crane Tower*

The old urban areas around the Yellow Crane Tower have a long and rich history, with a rich cultural heritage and historical accumulation. As a landmark building of Wuhan City, the Yellow Crane Tower was once an important transportation hub and commercial center in ancient times. It carries the memory and tradition of urban development. With the acceleration of urbanization, the old urban areas around the Yellow Crane Tower have also undergone multiple changes and updates, but its unique historical style has always been preserved. From the ruins of the ancient city wall to traditional residential buildings, every place carries rich historical and cultural information.

6.2 *Public Facilities and Leisure Venues in the Old Urban Areas Surrounding the Yellow Crane Tower*

In recent years, due to the accelerated process of urban renewal, some renovations and improvements have been carried out around the Yellow Crane Tower, such as turning idle land into convenient and leisure places, in order to enhance the surrounding urban appearance and environment. However, compared to the surrounding area of Guishan in Hanyang across the Yangtze River, Wuchang may appear low, depressed, and chaotic, with a need to improve the quantity and quality of public facilities and leisure places.

6.3 *Types and Current Status of Public Space in the Old Urban Areas Surrounding Yellow Crane Tower*

The public space in the old urban areas around the Yellow Crane Tower include various types such as squares, streets, parks, etc., which are the main places for tourists and citizens to relax. As a famous tourist attraction, the Yellow Crane Tower attracts a large number of tourists and has a high frequency of use of public spaces. However, there are currently many problems such as chaotic traffic and outdated facilities. The check-in points of internet celebrities around the subway entrance are very crowded and disorderly, and there is no place for people to rest and stay. The streets are important channels for commercial activities and traffic flow, but due to the lack of reasonable planning, they are narrow and crowded, and the environment is dirty and chaotic, which greatly affects the overall appearance of the city.

7. RENOVATION STRATEGIES OF PUBLIC SPACE IN THE OLD URBAN AREAS SURROUNDING THE YELLOW CRANE TOWER

7.1 *Reorganization and Reconstruction of Spatial Order*

The reconstruction of the public space in the old city around the Yellow Crane Tower needs to pay attention to the reorganization of the spatial order. Analysis of existing space usage, tourist flow distribution and functional area links. Improve vitality and attractiveness by optimizing layout, introducing new landscape elements, and strengthening traffic connections to rebuild spatial

order. The design should protect historical and cultural heritage and integrate traditional and modern elements. The implementation stage should take into account the needs of citizens and tourists, and introduce community autonomy and management mechanisms to ensure the sustainable development of public spaces. Comprehensive application of strategies and methods will provide effective ideas for transformation.

7.2 The Transition of Ecological Nature

In the public space renovation design of the old urban areas around the Yellow Crane Tower, the ecological and natural transition plays an important role. By preserving and strengthening the local natural environment during the renovation process, it can be combined with modern construction to create a more pleasant and comfortable living space. The ecological and natural transition can be achieved by introducing elements such as greenery, water bodies, and birds to create an urban space that can coexist harmoniously with nature.

When formulating renovation strategies, it is necessary to consider how to protect and utilize the surrounding natural resources in order to achieve a win-win situation between urban renewal and ecological protection. At the same time, it is also necessary to integrate the local culture and historical background into the design of public spaces, which can enhance people's emotional identification with this land and promote the sustainable development of the city.[15]

8. PRACTICE OF PUBLIC SPACE RENOVATION DESIGN IN THE OLD URBAN AREAS SURROUNDING THE YELLOW CRANE TOWER

8.1 Topic-selection Analysis

8.1.1 Background of Topic-selection

With the urban renewal and tourism development, the renovation of the old city has attracted attention. The promotion of tourism vitality in the old city is an important form of urban renewal, and the number and type are increasing. The design site is located in the entrance area of Wuhan Huanghe Tower Metro ("Figure 5"), considering that the Huanghe Tower is an iconic building in Wuhan ("Figure 6"), the surrounding old city has a unique urban style and cultural

heritage. Public spaces around the Yellow Crane Tower have problems such as inconvenient parking, traffic congestion, and environmental chaos, and need to be renovated. Although the neighborhood is a popular check-in point, but the lack of rest and accommodation facilities, the narrow flow of people, shabby, affecting the impression of foreign tourists. Therefore, the renovation of the public space around the Yellow Crane Tower can enhance the visitor's viewing experience, provide residents with a comfortable landscape environment, and improve the image and quality of life of the city.



Figure 5 Location analysis.

a Image source: Self-made.



Figure 6 Yellow Crane Tower.

a Image source: <http://xhslink.com/iWCIFJ>

8.1.2 Preliminary Research and Analysis

In the transformation of public space in the old city of Huanghe Tower, the researchers learned about the needs of residents and tourists through preliminary research, field trips and interviews. They identified inconveniences at the Yellow Crane Tower subway entrance and analyzed problems and design difficulties, such as congestion and lack of rest areas in the open area near the subway entrance ("Figure 7"). The researchers also surveyed the surrounding history and culture, demographics ("Figure 8"), crowd activity ("Figure 9"), and traffic conditions to guide the direction of the renovation design. Based on these factors, design

strategies include improving the quality of the landscape, increasing leisure space and improving infrastructure, creating suitable sightseeing spots,



Figure 7 Internet hot wall next to subway entrance.

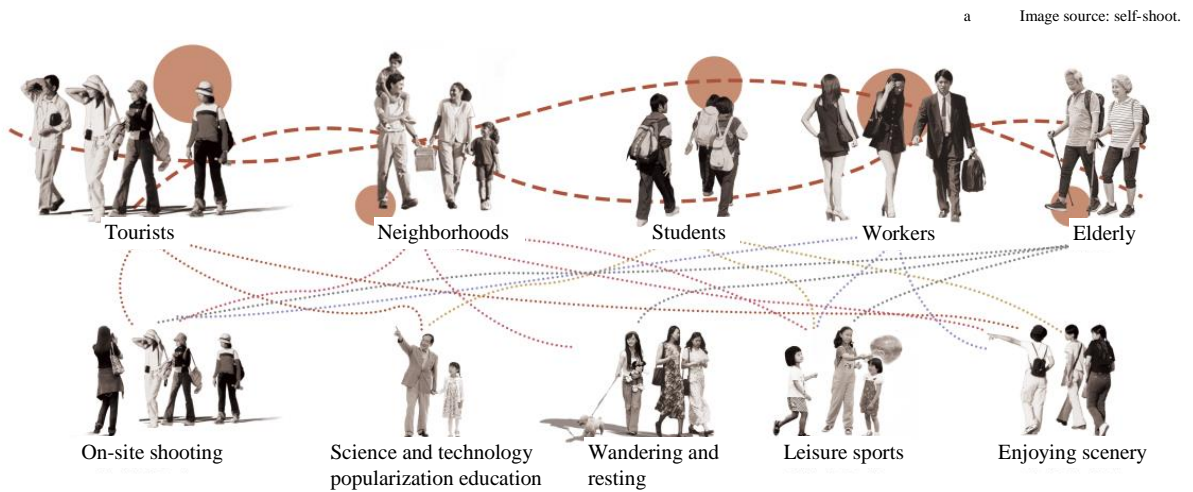


Figure 8 Crowd analysis.

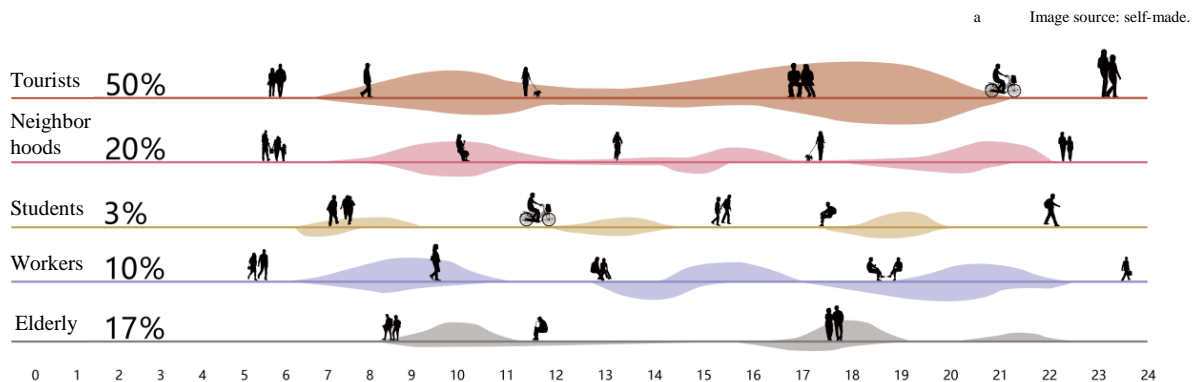


Figure 9 Crowd activities.

a Image source: self-made.

8.2 Project Planning

8.2.1 Design Concept

The project focuses on the transformation of public space in the old city around the Yellow Crane Tower, and draws up detailed plans based on in-depth research on the local history, culture, geography and social environment. The situation of surrounding buildings, roads, green spaces, residents and tourists was investigated and analyzed. In the design process, people-oriented design concept was formed by considering the protection of historical and cultural heritage, improving the quality of life of residents, and promoting urban tourism.

When renovating the design, it incorporates the concept of urban renewal, combined with humanistic care and historical and cultural protection, and focuses on spatial mobility and flexibility. Studying the surrounding environment and cultural characteristics of the site, excavating urban memory and cultural heritage, combining design with urban texture, Yellow Crane Tower is located in Snake Mountain. Combining earth-covered buildings with the original site, it creates a public space with local characteristics and humanistic concern.

8.2.2 Design Scheme

In the design scheme, the first consideration is to preserve and enhance the value of the surrounding historical and cultural heritage, as well as create a public space with contemporary characteristics. It is necessary to optimize the traffic flow, facilitate the travel experience of citizens and tourists, and improve the overall traffic efficiency of the region ("Figure 10"). In terms of landscape design, in order to echo the surrounding environment of the Yellow Crane Tower, the combination of soil covered buildings and site design can be achieved by adding green vegetation above the soil cover, setting up landscape sculptures, and creating a pleasant environmental atmosphere ("Figure 11"). It is also possible to consider introducing cultural and artistic activities, regularly holding exhibitions, performances and other activities to enrich the cultural life of citizens and the viewing experience of tourists. It is necessary to pay attention to communication and exchange with local residents and tourists, fully listen to their opinions and suggestions, and ensure that the design scheme can truly meet the needs of the public. It should not only meet the daily leisure needs of local residents, but also meet the travel experience of tourists. By comprehensively considering the above factors, the overall goal of the renovation design of public space in old urban areas can be better achieved ("Figure 12").



Figure 10 Rendering 1.

a Image source: self-made.



Figure 11 Rendering 2.

a Image source: self-made.

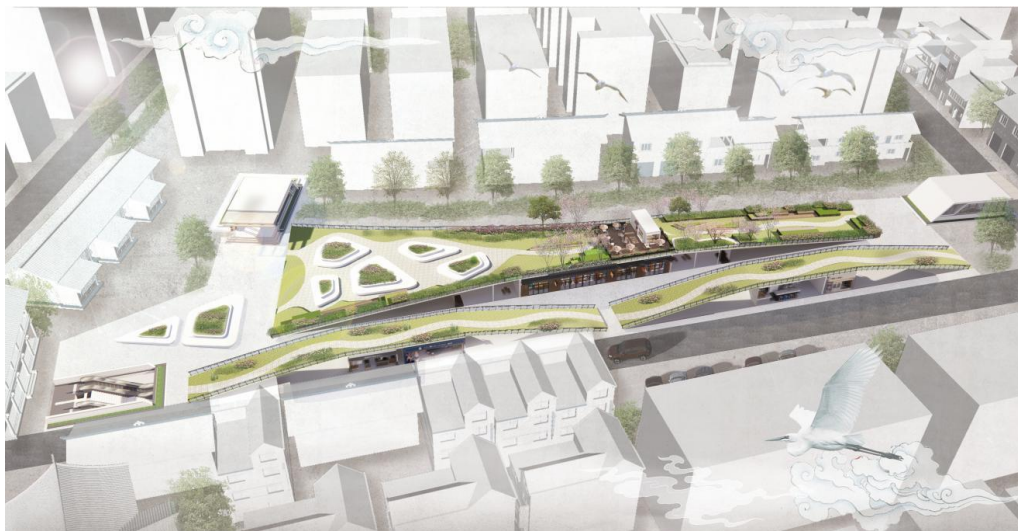


Figure 12 Aerial view.

a Image source: self-made.

9. CONCLUSION

The research on the renovation and design of public space in the old urban areas around the Yellow Crane Tower is aimed at enhancing the city's image and improving the many problems caused by overcrowding and low traffic efficiency due to the large number of tourists and unreasonable site planning. By conducting in-depth research on the current situation and problems of the old urban areas around the Yellow Crane Tower, learning from successful cases in China and foreign countries, and combining local culture and historical characteristics, it is necessary to improve

the city's image by updating public spaces and planning the site space reasonably. It is also necessary to provide better activity and rest places for surrounding residents and tourists who come to play, and effectively evacuate crowds, making public space more charming and dynamic. On the basis of protecting historical and cultural heritage, improving the quality and function of public spaces can achieve a positive interaction between urban renewal and traditional culture. Design includes landscape design, functional planning, traffic guidance, and other aspects to increase site traffic and utilization rates, and provide new ideas and methods for urban planning and design, promoting

the development of urban renewal. It can also attract more people to visit and play, enhance the city's appearance, drive local economic development, improve residents' sense of happiness and tourist satisfaction. Therefore, this study starts from the old urban areas around the Yellow Crane Tower, combines local culture and historical characteristics, and designs more charming and dynamic public space. Taking this as an example, it can provide reference and guidance for urban renewal in other similar regions of China.

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