

Research on the Protection and Utilization of Historic Districts under the Background of Urban Renewal

Yicun Wang^{1,2,3,4}, Dian Gan Chen^{1,2,3,4}, Rui Shao^{1,2,3,4}

¹Beijing Urban Construction Survey & Design Research Institute Co., Ltd., Beijing 100101, China

²Beijing Key laboratory of Deep Foundation Pit Engineering for Urban rail transit, Beijing 100101,

³China Beijing Design Innovation Center, Beijing 100024, China

⁴Wenzhou Happiness Rail Digital Intelligence Technology Co., Ltd., Wenzhou 325006, China

**Author to whom correspondence should be addressed.*

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Abstract: Urban renewal is profoundly reshaping the appearance and social role of historic districts. How to achieve rational utilization while protecting them has become a core issue for sustainable development. Traditional single-mode protection focuses on static maintenance, which is insufficient to meet the real-world needs of the diversified transformation of district functions. By establishing a comprehensive value assessment framework for historic districts, researching effective strategies for revitalizing their physical spaces under the premise of protection, and exploring innovative new models for sustainable cultural and ecological development, we can achieve the dual benefits of effective inheritance of heritage value and revitalization of regional space.

Keywords: Urban renewal; Historic districts; Protective utilization; Spatial reconstruction; Cultural heritage

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1. Introduction

Historic streets and alleys often showcase a city's unique cultural character and rich history. In the context of urban renewal, how to enhance the urban living environment while simultaneously showcasing the profound cultural heritage and fulfilling the functions of these historical streets and alleys has become a crucial issue requiring in-depth consideration in the protection and development of historical districts. Protection and utilization have long been considered opposing forces, with the former emphasizing original preservation and the latter solely pursuing economic benefits. This disconnection has resulted in historical districts either becoming overly commercialized or reduced to lifeless artifact exhibition areas. Under the backdrop of urban renewal, historical districts urgently need theoretical support and practical pathways for the coordinated development of protection and utilization.

2. Value reconstruction of historic blocks in the process of urban renewal

Urban renewal, through various means such as capital investment, policy support, and planning regulation, continuously reshapes the spatial form and social network of historical districts, and their cultural, social, and economic values are reinterpreted and given a modern interpretation in the process.

2.1. The driving mechanism of urban renewal on the spatial evolution of historic districts

Urban renewal is a spatial reconstruction activity led by the government. Through property rights conversion, planning parameter optimization and functional business adjustment, it has a profound impact on the evolution of historical blocks^[1]. Under the demand for land finance, local governments have included historical blocks in the scope of urban operation, which has led to a series of problems, such as excessive plot ratio, uncontrolled building height and damage to traditional patterns. As policy restrictions are gradually relaxed, market capital has rapidly poured into historical blocks. The commercialization process has led to the replacement of the original residential functions by catering, retail, tourism and other service industries. The increase in rent has prompted the original residents to move out, resulting in a break in the social structure of the blocks^[2]. At the same time, urban renewal has also brought good development opportunities to historical areas. The government has invested funds to improve infrastructure construction, private capital has participated in revitalizing vacant property assets, and the cultural consumption boom has expanded the influence of the entire block. This dual effect of innovation requires institutional norms to coordinate the relationship between development revenue and heritage maintenance, and to balance the multidimensional relationship between economic development and people's well-being.

2.2. Contemporary interpretation of the multidimensional value system of historic districts

The value system of historic districts transcends the traditional focus on architectural age and artistic style in cultural relic protection. Instead, it forms a multi-dimensional value structure with cultural heritage as its core and socio-economic functions as its extension. In terms of cultural heritage, the district space not only reflects the historical trajectory of urban development but also carries the historical memories left by important events. It preserves the stylistic characteristics of regional architecture and inherits the wisdom embodied in traditional construction techniques, collectively forming the material basis of the city's cultural DNA. In terms of social function, historic districts carry the emotional bonds between generations of residents, strengthening their sense of belonging to the local community. They also provide physical spaces for public interaction, constructing a community ecosystem distinct from emerging urban areas. In terms of economic function, historic districts attract numerous tourists with their unique cultural charm, incubate various creative industries based on their unique spatial layout, and enhance real estate value through cultural brands, becoming a differentiated advantage for the city's economy. Contemporary value assessment needs to comprehensively consider cultural authenticity, social continuity, and economic feasibility, avoiding the destruction of the integrity of the value system by unilaterally emphasizing one dimension^[3].

3. Protective utilization of physical space in historic districts

The physical environment of a historic district encompasses various components such as street and alley structures, independent buildings, courtyard spaces, and public areas. The protection and reuse of the physical

environment of a historic district should, while maintaining the authenticity of the spatial layout, introduce diverse uses that meet the needs of modern life.

3.1. Protection of the spatial fabric of the neighborhood and its functional integration

The spatial structure of a historic district is composed of factors such as street and alley network, plot size, building distribution, and spatial combination. Its formation stems from long-term natural evolution, not from pre-planned design. The street and alley system exhibits a moderately scaled, meandering spatial form, with alley widths generally ranging from three to six meters. This satisfies pedestrian needs while facilitating interaction and communication among neighbors. When protecting historical blocks, it is very important to keep the basic layout of streets and alleys intact. This includes their direction, bend and cross-sectional width. It is very important to prevent the original spatial structure from being demolished by widening or straightening these roads ^[4]. Functional integration requires layered planning based on existing spatial conditions. Restaurants, retail, and other commercial services can be appropriately added on both sides of the main street, while secondary alley areas should primarily focus on residential functions. Lightweight businesses such as cultural exhibitions and traditional craft inheritance can be integrated into the courtyards. Suzhou's Pingjiang Road adopted a "small-scale, gradual, and micro-renovation" renewal strategy, integrating distinctive cultural functions such as Pingtan teahouses and Suzhou embroidery workshops while preserving the spatial texture of "water and land side by side, river and street interdependent."

3.2. Restoration and adaptive reuse of historical buildings

When repairing historical buildings, the principle of minimal intervention should be upheld, and local raw materials and ancient techniques should be given priority to repair or replace damaged parts ^[5]. In the wooden frame, the rotten beams and columns are restored to their supporting capacity by means of piercing and patching. The brick and stone walls that have been peeled off due to erosion are rebuilt with the same material and the joints are treated. The damaged components of the tile roof are made according to the original size and then replaced. The structural reinforcement adopts a hidden treatment method on the basis of ensuring stability. The implantation of modern elements such as steel structure and carbon fiber is strictly limited to the premise that the building skin and spatial layout are not affected. Adaptive reuse selects appropriate functions according to its own characteristics. Shops with wide openings and large depths can be transformed into open business formats such as retail, catering or exhibition. Residential houses with narrow openings and large depths are suitable for conversion into spaces with high privacy requirements such as offices or studios. Courtyards can be transformed into semi-open places such as tea rooms and bookstores by adding glass roofs.

3.3. Continuation of residential function and improvement of quality in traditional courtyards

Traditional courtyards are a fundamental spatial element of historic districts, and their continued residential function sustains the living rights of the original inhabitants and the atmosphere of the neighborhood. Currently, these courtyards generally suffer from insufficient kitchen and bathroom facilities, poor lighting and ventilation, and structural safety risks ^[6]. Quality improvement needs to be carried out gradually without altering the original layout of the courtyards. Kitchen and bathroom areas can be expanded using courtyard annexes or unused corners. Resilient structural forms such as lightweight partitions and steel frames can also be used.

Water supply and drainage pipes, as well as power cables, should be installed exposed along the wall foundation and ground edges. Permeable materials should be used to improve drainage in the courtyard paving. Wall facade renovation includes demolishing illegally constructed parts, repairing cracked areas, and restoring the original paint color. Space optimization enhances natural lighting and ventilation by adding stairwells, expanding window openings, and installing skylights. During the renovation process, the spatial enclosure of the courtyard should be maintained to ensure that the proportion between the building and the courtyard is in harmony. The dominant position of the traditional building should be highlighted. While meeting the needs of modern living, the original historical features of the courtyard space should also be preserved ^[7,8].

3.4. Preservation of the character and revitalization of public spaces in streets and alleys

The public spaces in the streets and alleys integrate elements such as streetscape, paving materials, and ancillary facilities, and their features reflect the regional cultural identity of the historical district. The protection of building facades requires standardizing the materials, colors, door and window styles, and decorative details of the street-facing facades. Modern renovations that do not conform to the historical style should be removed, and traditional forms such as wooden doors and windows, blue brick walls, and pitched roofs should be restored. Shop signs and advertising plaques should ideally use wooden bases and handwritten fonts, and their size, layout, and color should be coordinated and unified with the overall style.

In the environmental renovation of Yangmeizhu Xiejie in Dashilan, Beijing, the incongruous modern decorations along the street were removed, the facades of traditional shops were reshaped, and cultural and creative spaces such as designer studios and art galleries were introduced. This has given this old street, which has historically been known for its rich cultural atmosphere, a new charm. The street paving prioritizes local building materials such as stone slabs and blue bricks. The new paving continues the local style in terms of texture and modularity. To revitalize the street, rest areas can be set up at street corners, and seating and greenery can be set up in the building setback areas. Outdoor stalls for businesses are also allowed to a certain extent to enhance the space experience.

4. Inherited development of the cultural ecology of historic districts

The cultural ecosystem of historic districts encompasses intangible cultural heritage, traditional business models, and community social networks. The principle of sustainable development is to promote content innovation and model upgrading while ensuring that the cultural foundation is not damaged.

4.1. Living preservation and display of intangible cultural heritage

The key manifestation of the cultural heritage of historic districts lies in intangible cultural heritage, whose continuation relies on connections within specific spaces and communities. For traditional crafts such as embroidery and carving, preservation requires ensuring the integrity of skill transmission ^[9]. This necessitates creating physical spaces like workshops and training centers to provide a stable platform for inheritors to showcase their skills and nurture new talent, thus building an organic system for the intergenerational transmission of skills between masters and apprentices. For performing arts such as opera and folk arts, theaters and teahouses can be utilized, and the halls of historical buildings can be renovated to maintain close interaction between performers and audiences, ensuring the performing arts retain their vitality through daily performances.

Craft workshops emphasize hands-on experience rather than static displays, offering interactive courses that allow participants to experience the exquisite beauty of the craft. Performing arts venues use immersive experiences to guide audiences into specific historical scenes, allowing them to personally appreciate the power of art. This experiential interaction transforms intangible cultural heritage from museum exhibits into a vibrant culture that can be touched and genuinely felt^[10].

4.2. Continuation and innovative transformation of traditional business formats

Commercial shops in historical blocks are closely related to local long-standing production and living habits. They can not only play the economic function of the block, but also enhance people's cultural identity^[11]. Traditional business formats such as teahouses, pharmacies, cloth shops, taverns and restaurants, their service content, spatial layout and reception methods vividly reflect the characteristics of local commercial culture. The continuous operation of time-honored brands provides core support for the inheritance of the commercial culture of the district. The production and sales combination business model adopted by traditional businesses, such as "front shop and back workshop" and "front shop and back residence", should be preserved as the key carrier for continuing the commercial format.

By maintaining the historical objects such as counters, shelves and plaques of the shop facade, the commercial space itself can be integrated into the system of cultural display. Traditional teahouses, while upholding their cultural characteristics, integrate modern business strategies, strengthening their social attributes by adding innovative forms such as cultural lectures and art exchanges. Traditional handicraft workshops offer innovative services such as personalized customization and experiential teaching to enhance public participation. Newly introduced business projects need to be in line with the overall cultural atmosphere of the neighborhood. For example, cultural consumption venues that combine local characteristics, such as bookstores, cafes, and cultural and creative product stores, have an advantage over standardized fast food restaurants or clothing retail stores. This combination of business formats can create a commercial and cultural environment in which tradition and modernity, local and foreign elements blend together.

4.3. Mechanisms for maintaining community social networks and public participation

The community social network of a historic district is composed of core elements such as long-term local residents, neighborly mutual assistance models, local cultural traditions, and shared historical memories, which are particularly important for maintaining the balance of the district's social system^[12,13]. The continued residence of local residents is fundamental to the continuation of the community network. Population migration leading to the disintegration of community structure causes the district to lose its original vitality, turning it into a mere tourist destination. Therefore, enhancing residents' willingness to reside is more reasonable than forcing them to stay. The mutual assistance among neighbors stems from shared courtyards and street spaces.

The social bonds formed by residents in their daily interactions constitute the intrinsic support of the district's social system. The inheritance of local customs such as traditional festivals, folk beliefs, and food culture further enhances the sense of collective belonging within the community. Public participation mechanisms establish channels for dialogue and consultation among residents, government, businesses, and professional institutions, transforming residents from passively accepting changes to actively participating in community governance. By widely soliciting residents' opinions in key aspects such as the formulation of protection plans, the implementation of renovation schemes, and the introduction of new businesses, the

community network gains internal vitality for self-sustaining and restructuring during the participation process, ultimately building a social ecosystem where residents' autonomous will and external support are mutually coordinated.

4.4. Institutional coordination and dynamic management of the protection and utilization of historical blocks

The protection and management of historic districts involves the functions of multiple departments, including planning, cultural relics, construction, market, and fire protection. Systematic coordination requires the establishment of a management organization to coordinate the work of these departments, effectively integrating fragmented administrative powers to form a unified decision-making and execution force for protection and utilization ^[14]. The protection plan must clearly define the specific boundaries of the core protection zone and the construction control zone, providing clear standards for subsequent development and construction activities. This will prevent implementation obstacles caused by conflicts between protection goals and development needs.

Simultaneously, a business access guidance catalog should be formulated, clearly defining the types of industries encouraged, restricted, and prohibited. Economic levers such as rent control and tax reductions should be used to guide businesses that align with the overall positioning of the district to move in, ensuring the orderly operation of market mechanisms under established regulations. Dynamic management establishes a regular evaluation mechanism, which regularly monitors key data such as population composition, business formats, tourist scale, and cultural activities to optimize protection and utilization strategies in a timely manner, bypassing static planning that are not able to adapt to the limitation of surrounding changes ^[15]. Social supervision introduces external forces such as public review, expert consultation, and media supervision to effectively restrain illegal development, make up for the limitations of government management, and ensure that protection and utilization work can be carried out in a standardized and orderly manner, thereby building a governance model that is government-led, market-operated, and socially collaborative.

5. Conclusion

In the process of urban renewal, the protection and utilization of historic districts need to transcend the traditional confrontational model and build a collaborative framework that aims to perpetuate value and revitalize functions. Spatially, it is necessary to coordinate the preservation of the district's fabric and the renewal of its functions. The restoration of historic buildings should meet relevant reuse requirements, the renovation of traditional courtyards should simultaneously improve residents' living conditions, and the improvement of street and alley environments should focus on enhancing the vitality of public spaces. Culturally, the dynamic protection of cultural heritage, the innovative upgrading of traditional industries, and the continuous maintenance of community networks constitute the core driving force for the sustainable development of the districts. In terms of mechanisms, a cross-departmental collaborative governance system needs to be built. Through a combination of planning guidance, policy support, and public participation, a dynamic guarantee mechanism can be formed to promote historic districts as living cultural spaces that showcase the city's character, preserve cultural memory, and serve contemporary life.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Bai H, Liu J, Wang Z, et al., 2025, Research on Protection and Revitalization Strategies of Haikou Qilou Historical and Cultural Blocks under the Background of Urban Renewal. *Architecture and Culture*, 2025(9): 221–222.
- [2] Zhan Q, 2025, Conservation and Regeneration of Historical and Cultural Blocks from the Perspective of Urban Renewal. *Education Reform and Development*, 7(8): 128–133.
- [3] Du J, 2025, Multiple Paths for the Protection and Regeneration of Historical and Cultural Blocks under the Background of Urban Renewal: Taking Nanjing Yihe Road Historical and Cultural Block as an Example. *Aishang Art*, 2025(4): 118–120.
- [4] Zhang Q, Cheng T, Xu P, et al., 2025, Balancing Heritage Conservation and Urban Vitality Through a Multi-Tiered Governance Strategy: A Case Study of Nanjing's Yihe Road Historic District, China. *Land*, 14(9): 1894–1894.
- [5] Yang D, Sun H, 2025, Protection and Renovation of Historical and Cultural Blocks in Huzhou City under the Background of Urban Renewal. *Real Estate World*, 2025(3): 167–169.
- [6] Fan J, Maliki Z, Abidin Z, 2025, Spatial Patterns of Historical and Cultural Blocks based on Multisource Data and Protection and Development Strategies within the Context of Urban Renewal: A Case Study of Xi'an, China. *Landscape Research*, 50(1): 4–22.
- [7] Cao R, Li T, 2024, A Study on the Protection and Revitalization of Historic Blocks under the Background of Urban Renewal: A Case Study of Dingzi Street in Hanzhong. *Architectural Design Management*, 41(12): 64–69.
- [8] Yang Y, 2024, Research on the Revitalization and Utilization Strategies of Historical and Cultural Blocks under the Background of Urban Renewal. *Economic Forum*, 2024(12): 56–64.
- [9] Zuo J, 2024, Research on Construction Technology for the Protection and Restoration of the Appearance of Historical Blocks under the Background of Urban Renewal. *Construction*, 46(7): 1053–1056.
- [10] Feng H, 2024, A Study on the Legal Construction of Protection and Revitalization of Historical and Cultural Blocks under the Background of Urban Renewal: Taking Jinan as an Example. *Architectural Design Management*, 41(3): 80–87.
- [11] Zhang R, Casanovas M, González B, et al., 2024, Revitalizing Heritage: The Role of Urban Morphology in Creating Public Value in China's Historic Districts. *Land*, 13(11): 1919–1919.
- [12] Hong X, Li F, Sun W, et al., 2023, Strategies for the Protection of Historical and Cultural Blocks and the Development of Underground Space under the Background of Urban Renewal. *Famous Chinese Cities*, 37(8): 43–50.
- [13] Liu Y, 2023, Analysis of the Protection and Renovation of Historical Blocks under the Background of Urban Renewal. *Residence*, 2023(6): 133–136.
- [14] Li X, 2022, An Exploration of the Protection and Renovation of Historic Blocks under the Background of Urban Renewal. *Beauty and Times (Urban Edition)*, 2022(11): 27–29.
- [15] Can K, Aminreza I, 2022, Modelling and Assessing Sustainable Urban Regeneration for Historic Urban Quarters via Analytical Hierarchy Process. *Land*, 12(1): 72.

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