

# A Balance between High-Density Development and Ancient Ruins Protection

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## I. INTRODUCTION

Nowadays, most of urban renewal projects in China are carried out by the estate agent because of the poor financial situation of the government. Consequently, urban renewal project become a competition stage for the local government and commercial real estate developer to achieve a quick return on investment, rather than address the problem of city's growing housing crisis and social ecological problems [1-3].

In these days, there is an argue that the "demolition and reconstruction" usually disturbs the balance of sustainable development of the city, and the low-density micro-renewal and reconstruction of the ancient city are advocated. However, the commercial real estate developers are often faced with the problem of huge capital turnover, which restrains their ability to accomplish the above-mentioned mission. On the other hand, urban vitality that is the ability for a city to generate vibrant society and economic activity [3-7]. Inspired by in [1], the vitality of urban renewal generally refers to social vitality, and hence extensive attention to it has been attracted by the contemporary architects. From the perspective of social balance, the sustainable-growth design of historical ancient ruins and surrounding high-density development are investigated in this paper.

## II. The process of urban renewal of urban villages in Shenzhen, China

As a special economic zone of reform and opening up, Shenzhen has developed from a small fishing village into an urban city within only 40 years. The main ideas and policies of urban renewal from 1982 to 2019 are shown in Table I, and a horizontal comparison of high-density urban renewal cases in Shenzhen is displayed. Then, the characteristics of each case are discussed in Table II. As can be seen, Shenzhen's renovation and reconstruction has changed from large-scale demolition and construction into development by stages and levels. People's strategies and thoughts are also reflecting on the radical mode of urban "demolition and reconstruction". Aside from the updated concept and project case process, the relevant factors including the governments, developers, managers, planners, architects, street people, villagers and renters are involved in the process of urban renewal and the ancient city of resurrection are discussed.

## III. Design of balanced growth

In the urban renewal process, in order to achieve the sustainable balance among the stable society, prosperous economy and good ecological environment, a flexible, balanced and sustainable development measure is needed to be developed.

The sustainable development goals are divided into three parts, including social, economic and environmental sustainability. Therefore, the conservation areas with historical features have been developed from the pursuit of single material to the combination of sustainable society, economy and environment, as shown in Fig. 1. From the perspective of social sustainable development, the balanced design between ancient ruins and surrounding high-density development buildings are studied here.

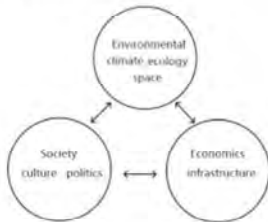


Fig. 1 The relationship between the sustainable development

### A. A Balance of Boundary Space

Ancient ruins and transitional edge sites are the spatial interface of the material and human activities. The differences are mainly reflected in technology, time, culture, and scale between the ancient ruins interface and the new development boundary. Compared with buildings, the ecological natural landscape can connect the creation of different times and different cultural backgrounds, create the spatial dialogue and coexistence of material and human activities, balance the ancient ruins environment and modern life, and establish a livable living environment from the social dimension. Therefore, it can obviously enhance social vitality.

Firstly, the ecological natural landscape at the edge of ancient ruins is constructed and then the various social activities are integrated into the ecological landscape. Specifically, the construction is initially transformed from the ancient ruins into a traditional park, and then from the traditional park into the new life of the ancient ruins. Finally, it is transformed into a new concept urban park with multi-dimensional, diverse, multi-functional and life-oriented scenes, as shown in Fig. 2.



Fig. 2 The new border

### B. A Balance of the New and the Old Texture in the Ancient Village

The texture and pattern of ancient ruins are the characteristics of urban form that inherit the historical pattern and are important structural elements. However, both the traditional free-growing streets and alleys have not been able to meet people's increasing environmental-protection and living needs. By the means of classifying the historical buildings, satisfying the historical form, and introducing the concept of micro-organic renewal, the space framework of streets and alleys in ancient ruins is comprehensively renovated. The old village of Xiao-xihu of Nanjing that combines the original streets with the lanes to form a 3-meter-wide cross-shaped structure respects the texture and context of the original village. It continues the historical context with the public space node of the inner street, so that the crowded ancient city has a public space of the complex community activity center. Therefore, the spontaneous vitality of the ancient ruins is greatly excited.

### C. A Balance of the Ancient Village of Spatial Nodes and the New Building of Spatial Nodes

Taking the ancient ruins as the core, the texture of the ancient ruins is extended with a series of spatial nodes from the inside to the outside. The outer space nodes form a huge outer ring based on the ancient city's circular texture, whereas the inner and outer rings of the ancient ruins are combined. Hence, the external resources serve the ancient city, forming a balanced and sustainable state of the society growth.

Table I Three stages of the urban village renewal research in China

Time	Starting period (1998-2003)	Development period (2003-2017)	Transition period (2018-for now)
Micro-background	Accelerating Global urbanization led to the commercial housing reform, widening gap between city and village.	A balance of the urban and rural development with a harmonious society.	A novel urbanized and high-quality development style.
Target of Urban renewal	The improvement of the living environment of urban villages	A solution of the villagers' worry to the comprehensive development of the village.	The development of a new type of urbanization was promoted by granting urban residency to migrant workers
The relationship between city and village	"city-village" split	"city-village" symbiotic	"city-village" compatibility
Industrial economy	Extensive operation-"Stack economy"	The operation mode of economy, the profit space, dividend distribution.	The relationship between informal employment and urban village economic development and employment
The social and cultural	A continuation of traditional rural social networks and exclusion of migrants is proposed. Besides, migrants bring a novel social relationship and culture.	Admitting the positive social significance of urban villages, the government pays more attention to the welfare and the development of the migrant population.	The means are to create social capital, leverage the role of community capital, and promote social transformation.
The pattern of the urban renewal	Local environmental renovation and renewal led by the government	Facing up to the development value of urban villages, it needs to explore the interdependent and symbiotic relationship between "city and village", and advocate public interest orientation, pursue the transformation mode of multi-party participation.	It proposes a comprehensive governmental approach from the perspectives of institutional innovation, government responsibility, and market mechanism, advocating the establishment of an inclusive renewal model
The main characteristics	To explore the formation of urban villages and their main characteristics.	From the isolated ontology research to the systematic thinking of "city-village" interaction	From a micro perspective, this paper focuses on the influence of urban villages on the development and transformation of cities and even the country
Relevant policy	1982: Urban land expropriation entered the countryside, and then the government issued a policy to curb illegal construction	2004: The urban planning standards and guidelines of Shenzhen : To divide historical features into three grades and announce the scope of protection.  (Outline of the Master Plan for the Reconstruction of Urban Villages (Old villages) in Shenzhen) : Measures of Shenzhen City for Urban Renewal) and so on explored the mode of "leading + urban operation" to transform urban villages in 2003-2009.	2018: The idea of "Cities can't be demolished and built" is proposed by Jinping Xi, carrying out the micro reformation with embroidery skill.  2019: Overall Plan of Comprehensive Renovation of Urban Villages (Old Villages) of Shenzhen (2019-2025)
Related theoretical research	Wu Liangyong proposed "Organic update" and "installation, progressive, upgrading community planning" in 1987 and 2000.	2006: City of acupuncture: Careful diagnosis and small intervention were performed before treatment. 2010: Microrenewal; 2017: Typology - Specific and organic renewal.	2018: partition urban renewal program  2020: Small scale, progressive

Table II High density urban renewal process related cases of Shenzhen

Time	Urban renewal area	Update the content	advantages	disadvantages	Suggestions	General comparison between the original and the update examples
2014	Da chong of Nanshan district in Shenzhen	1. Demolition reconstruction 2. Introducing a village in the city and the old industrial area into a commercial complex, offering buildings and modern residential community. 3. Delineating the demolition of land area by 47.1 hectares, and the developing of construction land area by 36 hectares.	1. To retain the original ancestral hall. 2. To public land 10.04 hectares, contribution rate to 23.2%. 3. The living rate fell to 55%, building more than 30 senior house, setting the living area, the formation of new city garden, and the other enclosed independent residential area.	1. Since 2019, the house price has been 120000 Yuan/m <sup>2</sup> , which made the area the low-income population into the urban middle class, and the original tenant were forced to migration. 2. The typical bourgeois character.	The government guidance, market and the stock company development.	
It is still under construction	Hu bei of Luolu district in Shenzhen	The urban renewal of the public plan land areas include the 400701.8-square meter building area of the 2.058 million square meters. The reconstruction area is 3.5 times of the one of the original area. The implementation of the lake in the core area are approximately 10000 square meters.	1. Lake-bei comb-shaped protecting land for activation range made a contribution to the projection, and it is beneficial to the operational efficiency and external effect. 2. To protect the Lake-bei history above, the paper puts forward the history of the original building comprehensive evaluation classification.	1. The development of high strength. 2. By controlling the style acknowledgment and elements such as the lack of content, 3, the ancient village action failed is protected.	Developers such as Group Woven, Folk Power, Home, and the government.  The amount of the common propulsion	

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