Research on Urban Regeneration against Urban Redevelopment based on sustainability

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Abstract

With the development of cities, people starts to discuss stock planning and incremental planning in depth. Cities should not spread disorderly, but need to renew themselves as an organism. Continuous overthrow and reconstruction is both a negation of the past and a waste of existing resources. Urban regeneration is a very important way to realize sustainable development of cities. This paper is going to research the urban development strategies both at home and aboard by case study. Comparing the advantages and disadvantages of urban regeneration and urban redevelopment through different ways of development, the planning experience is summarized. Further, it can give some enlightenment for modern urban regeneration.

Keywords

Urban planning; regeneration; redevelopment; sustainability.

1. Introduction

Since 1990s, urban regeneration has been widely discussed. It is still one of the hottest topics not only in academic circles but also among common people. At the same time, probably earlier, another similar term, urban renewal, has been researched as well. To large degree, both of them represent an attitude toward construction and an overall method of development as well. By contrast, urban regeneration is a relatively smarter development process, which conveys a harmony conception. Within this development process, some smarter and much more diverse renewal strategies are used, such as regional conservation and periodical redevelopment. (Wise, 1985)

In western, urban regeneration has been regarded as a comprehensive and integrated ideal to solve all kinds of urban issues. As a result, it can offer a long-term benefits and improvements to different urban areas involving economy, social problems and even physical environment. (Roberts, 2000)

In China, the context of urban regeneration is more complex than expectation. Learning from the western countries, especially some successful cases, is required as a must due to the weakness of theoretical basis of urban regeneration. Besides, some strategies with Chinese characteristic will be proposed.

2. Domestic case

2.1 Background

Due to the requirement of both enterprises further development and the urban construction, Shougang old factory area in Beijing need to be regenerated as a new energetic area. This area is a very important node along Chang'an road. (Figure 1) From the perspective of ecology, it also plays a vital role in urban green system, which nears Yongding River. (Figure 2) With the regeneration planning, this area is expected to be a typically sustainable community.

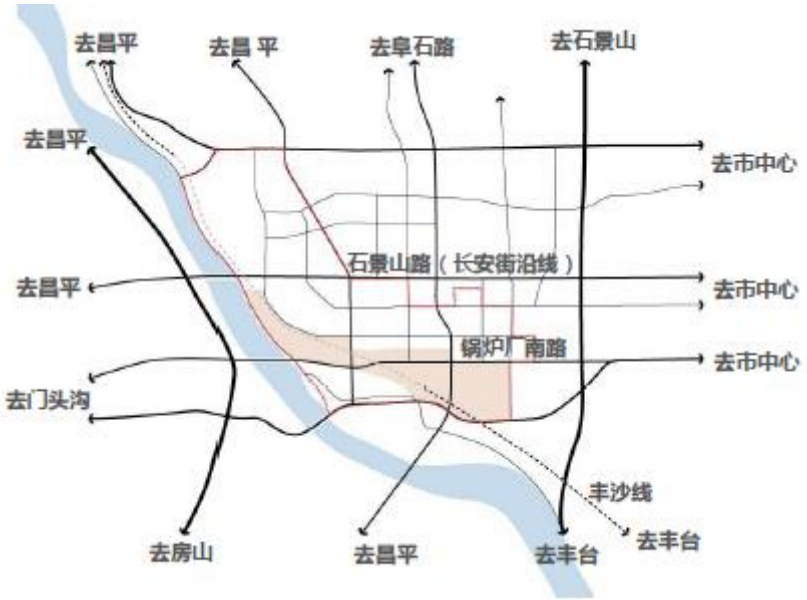

Figure 1. General Location Analysis
Source: AECOM, Beijing, China

Figure 2. Ecologic Elements Analysis
Source: AECOM, Beijing, China

A majority of land use inside the site is old factory including logistics factory and warehouse. Besides, a railway goes through the middle. What is worse, part of the land which is used as original iron warehouse is polluted.

2.2 Issue raised

Good natural resources situation had become a great challenge for decision makers. As an old industry area, regeneration based on ecological restoration will bring vitality into this area. Within this issue, how to balance the development of economy and natural environment, how to reuse the brownfields and how to enhance the quality for people living will become the keys to this issue.

2.3 Strategies and experience

Within the regeneration planning, new public green spaces are located on the area where it was once polluted warehouse. Using plants to remediate contaminated lands is one of the ecological strategies, which can lead to a win-win situation.

Creating a valuable and diverse riverside space assists this old factory area to be regenerated efficiently. Good equality of environment would increase the total value of this area in a long term period. Firstly, through the restoration of regional green space, the connection between Xiangshan Mountain and Beijing urban green belt can be strengthened. Secondly, improvements of accessibility to waterfront spaces can create more opportunities for people. (Figure 3)Lastly, the land around open spaces will be developed as land mixed-use including big shopping mall, which offers higher profits economically.

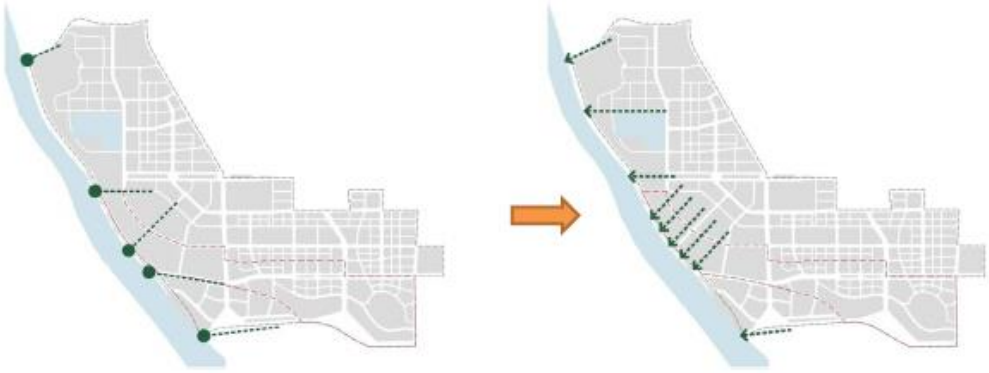

Figure 3. Improvements of Accessibility to Waterfront Spaces
Source: AECOM, Beijing, China

In order to balance the traffic infrastructure with the intensity of land development, the bus station is relocated properly and the land use is partly changed. (Figure 4)

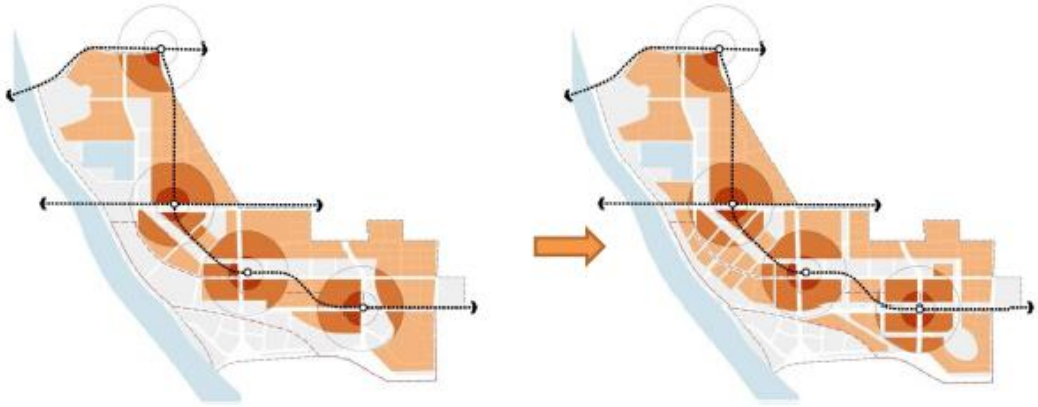

Figure 4 Adjustment of Bus Station and Land Use
Source: AECOM, Beijing, China

Figure 5 Sight Corridor towards Waterfront
Source: AECOM, Beijing, China from map.google.com

Another compromise is about limiting the amount of regional development strictly. Building height is restricted, which partly results in a rhythmic skyline especially the space along the riverside.

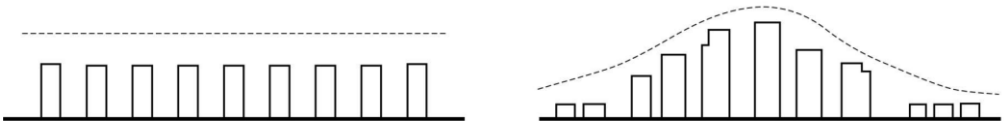

Figure 6 A Rhythmic Skyline

In addition, there are 3 old houses including 1 workshop and 2 warehouses would be preserved as signs of the past history. In this way, old memories can be remembered.

3. Overseas case

3.1 Background

In Germany, German has used 10 years to regenerate Ruhr industry area. It is a regionally comprehensive regeneration planning which is called IBA for short. The regeneration site is located at Emscher area, to be specific, the northern Ruhr Valley. (Figure 7)

3.2 Issue raised

Ruhr Valley suffered the extremely high population density. With the recession of industrialization, large part of Ruhr is significantly influenced resulting in many ecological and social problems, such as energy crisis and employment issue. Nowadays, from the view of effects it has, it can be seen that the regeneration of Ruhr Valley is quite successful.

Figure 7 Site Location of IBA in Germany

Figure 8. Open Museum in Ruhr
Source: blog.sohu.com

3.3 Strategies and experience

Through this regeneration planning, there are mainly 3 ingredients that are worth being learned. Firstly, abandoned steel factories have been transformed into open museums. (Figure 8) Inside these museums, kids have access to many kinds of games related to industrial production. Meanwhile, tour guides are occupied by previous workers, which can partly solve the employment problem. Then, many huge abandoned factories have become important commercial and public buildings. (Figure 9)Most importantly, the regeneration model in Ruhr is a regional integration planning. Social problems, industrial construction reuse and restoration of ecological environment are all taken into consideration to conduct this regional regeneration. It even involves marketing management and tourism itinerary planning, which have made this planning quite successful.

4. Discussion

For urban construction and development, urban regeneration is not cure-all solution.In this society with increasingly spiritual emptiness, people need spiritual sustenance instead of material satisfaction. To some degree, it is believed that regeneration can keep a good connection between people and local built environment.

The historical building conservation and reuse offers local people a place for being reminded of the past history. Besides, it reduces the cost for redevelopment greatly. Based on the building conservation rules, some concerned regulations have been proposed, such as surrounding building

heights restriction and limitation of land development intensity, which results in a good living quality. Eventually, it makes the area and even the whole city unique.

As elaborated above, ecological environment restoration is as important as cultural expression. Similarly, good natural environment will bring vitality and attract more people into this area. Through methods of planting and establishment of open green space, these areas have been transformed successfully as urban public spaces.

Flexible design strategies and regional integration planning is the prerequisite of success. Keeping the goal of serving for people and solving the existing problems will make the urban regeneration more efficient and effective.

Based on the mitigation of social problems and environmental effects, economic benefits can be achieved by land use diversity and the rising land price caused by good ecological environment and strong infrastructure. It is worth mentioning that the expenditure of urban regeneration is relatively huge regarding to maintenance and operation. Mostly it may not be a cost-efficient business from the view of economy. This practical issue is obvious especially in China. That is to say, there are a lot of areas which are not suitable for regeneration. The village inside the city is a typical example. Old memories have been replaced by terribly social issues. Objectively, part migration and redevelopment could be a better solution than regeneration. Within this redevelopment, not only the guidance by local government but also the participation of stakeholder needs to play important roles.

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