Research and Application on the Dynamic Protection Approach using in the Historic residential Blocks Renewal

— Taking the design of the historic residential block in Xijindu historic district, Zhenjiang as application case

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Master thesis, 30 ECTS, Spring semester 2013
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Unless otherwise stated, the drawings and maps are made by the author.
Abstract

In this paper, the main research question is How can the Dynamic Protection approach be used for the renewal of the historic residential block and make the old living areas become full of vitality?

The historic residential block is a part of historic district, and it mainly refers to the block in which the buildings have mainly the residential function in the past, and even today they still retain the living function as its main function. The community, historical significance, size and built density, distinguishable features and identity, continuity, strong vitality, and diversity are the main characteristics of the historic residential block. The use value is the basic value of historic residential block, and together with the historic value and cultural value, make up very important features of the historic residential block, that should be carefully considered during the renovation process.

I argue here that by the dynamic protection approach, the attractiveness and vitality lacking in many of these neighborhoods could be brought into the historic residential block again. The dynamic protection approach emphasizes the sustainable, organic and small-scaled renovation of historic residential block and it focuses on the protection of the intangible cultural heritages as well as the tangible heritages in the block. The goal of dynamic protection approach is to stimulate the development potential of the block itself and restore the vitality to the block, make the block not only well protected, but also re-adapted to the development of the modern city. Therefore, I consider that the dynamic protection approach is suitable for the renovation of historic residential block.

In order to explore the application of the dynamic protection in practice, I use a case study approach as my research method. In order to explore the application of dynamic protection approach in a Chinese historic residential block, I conducted a design proposal of the historic residential block in Xijindu historic district, Zhenjiang, my case study, as an application case. I concluded through my case study and the design proposal that the dynamic protection has strong operational value in practice.

Key words: Historic residential block, Dynamic protection approach, Renewal, Xijindu historic district.
Acknowledgements

The completion of this thesis means the two years study of the urban design program at Blekinge Institute of Technology and Nanjing Forestry University will end very soon. At this moment, I want to extend my sincere gratitude to all the teachers in both schools. I absorbed a lot of new knowledge by your wealth of knowledge and vivid teaching in these two years. Also, I'd like to say thank you to my classmates, we have lessons together and completed projects together, I learned a lot from you during these unforgettable years. I want to particularly grateful to my tutor Ana Mafalda Madureira, for her seriously guidance and valuable suggestions of my thesis during this semester. Meanwhile, I want to thanks Gunnar Nyström for his invaluable suggestion of my design proposal. And I would like to thank all my dear friends and parents, for your precious encouragement and support in this four months.
# Contents

Chapter 1. Introduction .............................................................................................................. 1  
 1.1 Background .................................................................................................................. 1  
 1.2 Aim and research questions ........................................................................................ 3  
 1.3 Brief introduction of the design area ........................................................................... 4  
 1.4 Structure of the thesis .................................................................................................. 6  

Chapter 2: Historic residential block ...................................................................................... 8  
 2.1 The concept of historic district ..................................................................................... 8  
 2.2 The classification of the historic district ....................................................................... 11  
 2.3 The characteristics of historic residential blocks ......................................................... 12  
 2.4 The value of historic residential block ......................................................................... 15  
 2.5 Conclusions ................................................................................................................ 19  

Chapter 3: Research on Dynamic protection approach ......................................................... 21  
 3.1 The evolution about the protection rules of historic district ........................................ 21  
 3.2. Most common approaches to urban renewal .............................................................. 24  
    3.2.1 The Large-scale renovation approach in the western world .................................. 24  
    3.2.2 The static protection approach ............................................................................. 30  
 3.3 The dynamic approach ................................................................................................ 34  
    3.3.1 The definition of dynamic protection ..................................................................... 34  
    3.3.2 Analysis of Dynamic protection approach ............................................................ 36  
 3.4. The approach of Dynamic protection applied to the renewal of historical residential block ........................................................................................................................................... 37  
 3.5 Conclusion .................................................................................................................. 39  

Chapter 4: Methodology ........................................................................................................ 40  
 4.1. Reason for a case study approach .............................................................................. 40  
 4.2. Reason of choosing the case -- design of Xijindu Residential block in Zhenjiang ...... 41  
 4.3. Collection and analysis of the data ............................................................................ 42  

Chapter 5 Case Study ........................................................................................................... 44  
 5.1 Introduction to the site .................................................................................................. 44  
    5.1.1 Location ............................................................................................................... 44  
    5.1.2 Main function of each block in Xijindu historic district and surrounding area ....... 46  
 5.2 Analysis of the site and surrounding area ..................................................................... 48  
    5.2.1 Road Network ...................................................................................................... 48  
    5.2.2 Traffic Situation ................................................................................................... 50  
    5.2.3 Green Space ........................................................................................................ 52
5.2.4 Surrounding public facilities .............................................................. 53
5.2.5 Photos of surrounding area .............................................................. 54
5.3 Conclusions .......................................................................................... 54
5.4 Design Guidelines ................................................................................. 55

Chapter 6 Design Proposal ......................................................................... 57
6.1 Connection with train station ................................................................. 61
6.1.1 Bus system ....................................................................................... 61
6.1.2 Bicycle system ................................................................................. 62
6.2 Renovation of historical buildings in the block ....................................... 62
6.3 The illegal buildings in the block ......................................................... 67
6.4.1 Courtyard and entrance space ......................................................... 72
6.4.2 Small public squares ....................................................................... 73
6.5 Connection with the surroundings ....................................................... 79
6.6 Function of the block ........................................................................... 82
6.6.1 Shops along the road ....................................................................... 83
6.6.2 Guang-zhao Hall .............................................................................. 84
6.6.3 New function of the block ............................................................... 85
6.7 Conclusion ............................................................................................ 87

Chapter 7: Summary and Conclusions ....................................................... 89
7.1 Summary .............................................................................................. 89
7.2 Conclusion ........................................................................................... 92
7.2.1 Limitations ..................................................................................... 92
7.2.2 Contributions .................................................................................. 92
7.2.3 Suggestions .................................................................................... 93

Reference .................................................................................................... 96

Image resource ........................................................................................... 102
Chapter 1. Introduction

1.1 Background

The city is the deposit of the human culture. The role and contribution of the city is that it could keep the spread and development of urban history and culture (Mumford, 1961). Historic districts are the epitomes of urban development, they contain a wealth of the material and non-material characteristics of a city and of its history. The main body parts of the Chinese traditional city are made of residential blocks, and a small amount of commercial streets. Today, this kind of traditional historic residential block has become an important characteristic public space in the surviving historic districts. They are very important parts in the historic districts, full of the precious historical records, and the rhythm of the city life is continuing inside of these districts.

Currently, China is living a period of economic growth, and most of the cities are experiencing a process of quick urbanization and economic growth, with the urban appearance changing with each passing day. The urbanization process has resulted in great achievements, such as the advanced commercial centers, comfortable and modern living communities, new and convenient transportation system, etc (Zhang and Han, 2011). At the same time, as the modern urbanization process reflects on the transformation of historic residential blocks, a large amount of historic districts have encountered unprecedented impact and challenges. Guided by a "Destroy the old and build the new" type of policy and the large-scale rebuilding approach, many famous historic districts are impacted and have collapsed in recent years (Chen, Zeng and Yu, 2012). The old houses have been removed, replaced by the tall stacks of modern residential buildings, the traditional roads have been gradually widened, the street space changed from semi-private into open; the speed of transportation reduced the street activities to a minimum (Liu, 2011). Gradually, the historic districts lost their own style and features, and have become uncharacteristic. These living blocks no longer carry the long traditional culture life, the space inside and function of them is becoming more and more unified and monotonous, the vibrant and diversified public activities have gone. People live in comfortable houses in the modern tall buildings, but have little communication with the neighbors. They drive and walk on the straight and unobstructed roads, but they are too in a hurry to enjoy the scenery along the way and say "Hi" to the people who walk close to them. They play on the spacious public green space, but have few opportunities to interact with people around. People begin to yearn for the traditional residential blocks, which have a friendly sense of space and harmonious interpersonal relationships.
Great challenges that the historic residential blocks are presently facing are a consequence of quickened urbanization. On the one hand, the development of the economy brings enormous pressure to the city, and many of the city's historic districts face the problem of congestion and aging population and infrastructure. The buildings and infrastructure in the historic living blocks are often facing increasing decline. Therefore, the historic districts are unable to satisfy people's increasing demand for housing and quality of living condition. At the same time, the residents look forward to better living conditions. On the other hand, the historic living block is an important part of the city's cultural relics, it contains enormous resources to protect and enjoy. Also the district's historical and cultural value, the significance of the regional characteristic, the pleasant space scale and the high sense of space characteristic, are important (Sun, 2012). All of them are particularly valuable and this paper will discuss how to promote them through an urban design proposal.

The protection of the historic residential block does not mean the rejection of modern civilization. In recent years, research about conservation and renewal of the historic districts mainly focused on looking for a protection method, which can solve the problem about the materiality of aging, structural and functional imbalance, which are faced by the historic districts. However the Historic districts should not only show the characteristics of the development of history and culture, or respect for traditional life style, but also be able to adapt to the development of the modern city. I would like to see a benign interaction between the protection of historic districts and urban development in the future.

Under the influence of the preservation of cultural relics, some protection work of historic district in China simply adopted the protective methods of heritage conservation, and used the static protection approach as the guide (Tan, 2006). Because this approach often pays attention to the cultural relic itself, this could be very favorable to the protection of single relics. But, in the protection of historic district, this approach could ignore the continuation of the intangible cultural heritage protection and the overall development of the whole area. Also, due to the requirements of the Government Performance Project, some government leaders want the time of execution of each project to be as short as possible, and the volume as large as it can be. The square of the Monument about the Strike in Zhengzhou (Image 1-1) serve as an example. It used to be a small historical residential district surrounding the monument. Then in the process of urban renewal, they overturned all buildings except the monument, and designed a public square surrounding the monument. I think the protection and renewal of this district was not adequate because currently, this monument is treated as a small museum, and completely isolated the monument from its historical context. Also the square built surround it has no features to remind people to pay their respects to it, there is a lack of monumental atmosphere, and it completely lost the original meaning of it.
Therefore, some researchers think using the dynamic protection approach could be a good way to create a coordinated development between the protection of historic residential blocks and the development of the modern city. I will introduce this in detail in Chapter 3.

1.2 Aim and research questions

Therefore, in this paper, my main aim is thus to use the dynamic protection approach to formulate a design proposal for the Xijindu district, with the goal of creating a livable, attractive, and well protected historic residential block.

To address the aim, there are two research questions in this article:

1) How can the Dynamic Protection approach be used for the renewal of the historic residential block and make the old living areas become full of vitality?

This question will be answered by research on the dynamic protection approach and then, based on literature review and the case study, the advantages and disadvantages of it will be discussed. I will analyze the Dynamic Protection approach and try to find out the differences between the Dynamic Protection approach and the mainly used approaches in China, such as large-scale renovation approach and the static protection approach. This could help to have a clear understanding about the Dynamic Protection approach and derive some methods for its implementation in design proposals.

2) How can the Dynamic Protection approach be used in the design project of the historic
residential block in Xijingdu district, Zhenjiang and is it suitable for this area?

This question will answered by practical application of the Dynamic Protection approach in the form of a brief design proposal.

1.3 Brief introduction of the design area

![Image 1-2 Location of Jiangsu province](image1) ![Image 1-3 Location of Zhenjiang](image2)

The design site is located in Xijindu, Runzhou District, Zhenjiang, China (Image 1-2). Zhenjiang situates in the south of Jiangsu province (Image 1-3), and it's located in the south of the Yangtze River Delta Economic Zone, 237 kilometers away from Shanghai (1 hour by train), and 910 kilometers from Beijing (4hour, 21minutes by train) (Image 1-4). Nanjing (the capital of Jiangsu province), Changzhou, Yangzhou, Taizhou are all the neighbors of Zhenjiang. Zhenjiang is the only intersection of Yangtze River and the Beijing-Hangzhou Canal. The geographic conditions of this city are very good; it is the traffic center of the north and south parts of Jiangsu. The total area of Zhenjiang is around 3848 square kilometers, and the population is about 3.16 million. Zhenjiang is a national important historical and cultural city. Since ancient times, Zhenjiang is known as the city of the wealthy land and the commercial port (Zhenjiang Municipal Government Office, 2012).
The study area is seated in Xijindu historic district (Image 1-4). Historically, the Runzhou District, especially the Xijindu area, was the city center of Zhenjiang, and it’s also the most concentrated area of history and culture in Zhenjiang. Due to the developing requirements of the new government, they established the new political and economic center in another district - Jingkou. Then the Runzhou District started to slowly deteriorate with the new and quick urban construction and development of the city.

Recently, according to the information from the urban planning administration, the government began to pay attention to this area. Due to the special historical culture and geographical features of Xijindu, Runhou District, the government plans to create a new cultural center in this district (Zhenjiang Urban Planning Bureau, 2010).

The detail introduction of Xijindu district and the analysis of the design site can be found in Chapter 5 and Chapter 6.
1.4 Structure of the thesis

In order to answer my research questions, the paper will be organized as shown in the Image 1-6. Specifically, the following paper will be divided into 4 main parts.

Firstly, in Chapter 2, I will discuss about "What is historic residential block?" The historic residential block is part of historic district, so, this chapter will start from the discussion of historic district. I will bring forth the characteristics and values of the historic residential block. Then, based on the research and analysis of historic residential block, I will try to sum up the key points that should be taken a full account of the specific design and implementation of the block.

Secondly, in Chapter 3, I will discuss about "What is dynamic protection approach?" and "Why is this approach good for the renovation of historic residential block?" First, the most common approaches in China: large-scale renovation approach and static protection approach will be discussed and I will discuss the reason why they are not suitable for the renovation of historic residential block. Then, I will continue on the analysis of dynamic protection approach, and try to point out the key points of the approach and how to apply this approach on the renovation of historic residential block.

Thirdly, I want to use the dynamic protection approach in practice and discuss whether it could apply on the real historic residential blocks or not. Therefore, I will use case study as research method for study. So, in Chapter 4, I will discuss about the reason why I want to choose case
study as research method and how would I collect and analyze the data. Then, I will choose the
design of the historic residential block in Xijindu district, Zhenjiang as an application case, and
the detailed analysis and design proposal will be taken up in Chapter 5 and Chapter 6.

Finally, according to the theoretical analysis and practical application above, the summary and
conclusions will come out in Chapter 7.
Chapter 2: Historic residential block

2.1 The concept of historic district

The concept of the historic district was first derived from the *Charter of Athens*, which was settled in the fourth session of C.I.A.M (the International Congresses of Modern Architecture) in 1933. This document pointed out that the historic district is the site which contains the historical buildings and historical cultural relics.

Smith thought, the historic district considered as an area of special architectural art and historical characteristics. The protection of historic district should include the building groups, public space, street forms, as well as old trees. The size of the protected area is different, such as the central area of the ancient city, public squares, as well as traditional residential areas, streets and villages (Smith, 1969).

In China, the concept of historic district was officially put forward in 1986, when the State Council released the second batch of national historical and cultural cities. It said, historic district is more concentrated heritage, or to more fully reflect a certain historical periodical characteristics of traditional style and ethnic neighborhoods, and buildings. They all should be protected, and according to their historical, scientific and artistic value, they should be approved and announced as Conservation Districts of Historic Sites (The State Bureau of Cultural Relics. 1997).

The word "Historic District" often appears in papers about the reconstruction of old cities. The historic district is considered as the area which contains traditional streets, residential and heritage buildings, and the historic district can fully embody the traditional style and local characteristics (Gu, 1999). The historic district is one of the typical types of historic landmark, is an important part of the whole city. Some parts of the historic district have already changed into tourist attractions, especially the old center part of the historic district, such as the historical commercial street and the historical cultural area. However, lots of houses in the historic residential blocks are only normal buildings and very messy, the government and developers are too busy to change these parts into tourist attractions, or they just tear them down and then build something new there. This makes the residential blocks, which are still existing, could still keep the function as a dense urban residential area in the downtown.

Tiesdell, Oc and Heath argue that the historic district concept refers to places where considerable numbers of historical buildings were concentrated in the small range area. They
believe that the historic district generally has a relatively small-scale, mixed function, and a good walking environment, which meets but does not encourage the use of cars, as well as buildings of different scales (Tiesdell, OC and Heath, 1996).

Ruan thought a district should have three characteristics, in order to be classified as a historic district: (Ruan, 1995)

1. Have a certain scale. Only if the historic district reaches a certain size, then it could form a certain atmosphere, and then people can get the feeling of historical regression. If there are only a few houses, it's not enough.
2. Have real historical heritages. In the historic district, there must have real historical monuments inside, such as historical buildings, old streets, traditional yards, old trees, etc. Additionally they should be original historical remains, not archaize fakes.
3. The historic district should still play an important role in the city (town)'s life.

Subsequently, in Wang's study about the characteristics of historic district, he agreed with Ruan about two points: "A certain scale" and "Have real historical heritages". He also added one point: The historic district should have a complete and particular historical style (Wang, 1988). The buildings inside designed similarly, the streets' structure, material and organization of construction should have a typical historical style. They should reflect the historical character of the city and the city's traditional features.

In the book The Protection Theory and Planning of Historical and cultural Cities, the authors regarded the historic district as a living place, which saves a certain number and size of historical constructions and has relatively complete life style. The regional architectures of this district may not all have great value as cultural relics, but they constitute the overall environment and social order which could reflect the characteristics of a particular historical period. This is, for these authors, the key point of the historic district (Wang, Ruan and Wang, 1998).

As a conclusion, I think the historic district emphasizes not only individual buildings, but also the overall space and social order posed by many individual constructions. It also is not just the palaces, temples or other very important historical and monumental buildings, but includes also normal old residential houses, small shops and the overall environment space composed by them. So, I think, to understanding of the historic district, we should grasp two key words:"History" and "Whole". The "History" means, the district should be a real historical area, contains real historical relics. The "Whole" means, the district should be considered as a whole area, not some single historical buildings.
So, for the context of this thesis, the "historic district" will be defined as: an area of a certain scale, that formed and developed gradually in a long-term historical process, contains a certain number and size of real historical relics, and could reflect a certain historical period of the city and social life style. In the natural environment, social environment and living environment, the historic district contains the urban regional characteristics of urban space.

Attempting some sort of definition of its main characteristics, I could add that the historic district should have the following characteristics: (Image 2-1)

(1) **Historical significance**
The historical block should have real historical monuments, which could reflect the historical appearance there. Such as the buildings, streets, walls, old trees, etc. and they are not fakes or imitations of historical buildings.

(2) **Size and built density**
The historic district must have a certain scale of the area (District), rather than just a few houses.

(3) **Distinguishable features and identity**
The historic district has characteristics that distinguish it from other parts of the city. These characteristics can be manifested through the buildings in the historic district, spatial characteristics, or a variety of traditional activities.

(4) **Continuity**
The formation of the historic district experienced a long historical process. The continuity in the historic district is that we still could find the traces of change. For example, the historical buildings built in different era, different habits acted by different people moved here from different places, etc.

(5) **Strong vitality**
The historic district should have strong vitality and development potential. And it has the value of existence, instead of tearing down or replacing by others.

(6) **Diversity**
Historic district contains not only the historical buildings, monuments and some other tangible objects, but also including the culture, lifestyle, arts and crafts, and some other intangible wealth.
2.2 The classification of the historic district

The traditional historic district is not mono-functional, instead these districts are characterized by their functional diversity. Residential areas, commercial places, school, workshops, etc are distributed promiscuously, they form the functional diversity in each area.

Some single buildings in the historic district may not have cultural value, but the overall environment constituted by them could reflect the features and characteristics of a historical period, and thus the value of the buildings have been sublimated. The historic district is not only limited to the palaces and temples or other important monuments, but also a wide range of contents, including residential houses, small work-shops etc.

In Japan, the amendments of Heritage Preservation Act in 1975 added the concept about "Traditional building groups". The "Traditional building groups" could understood as historic district, and it could divided as the traditional commercial street, traditional residential area, handicraft workshops' block, recent foreign-style concession area, etc.

Therefore, due to the location in the city, as well as this area's historical evolution, I think each historic block have one main function, and based on the main function, the historic district could be divided into three parts: the historic residential blocks, the historic commercial blocks, the historic cultural blocks (Feng, 2006 and Sun, 2007) (Image 2-2).
(1) Historic residential block
It mainly refers to the blocks in which the buildings traditionally have mainly the residential function, and until now, living is still regard as its main function there. Buildings in this area are mostly used as living quarters, and some have mixed functions: the first floor or the outside rooms are small shops, the rest still used for living. These types of shop are generally used for family workshops, small craft shops, and other small business activities.

(2) Historic commercial block
It mainly refers to the blocks which the buildings there are mainly used as commercial shops in history. Generally speaking, these blocks are located next to the main streets in the historic district, carrying the main commercial activities in the past. Buildings in this area are generally used for commercial, a few building will only retain one or two rooms for residential function. Until now, this type of commercial street is also still has great economic vitality.

(3) Historic cultural block
The buildings in this kind of block are mainly schools, palaces, etc. Until now, function of these buildings there has been totally changed. Generally, they are used as museum or gallery right now, and become cultural tourism blocks.

2.3 The characteristics of historic residential blocks
In subsequent research, Ruan put forward a characteristic about historic district: Have real life inside (Ruan, 2001). The historic district should not be a empty space only with well protected buildings, there should be people really living inside. The historic residential block is a big part
of the historic district and the main place for living.

In Wu’s thesis, she called the historic residential block as "Historical community". She thought, in the historic residential block should have some relationships, such as domestic relation, friendship, partnership, etc, and some organizations, such as community board, elder club, etc, to bring people together (Wu, 2006).

Therefore, as I summarized, the historic residential block should not only have the six characteristics of historic district, but also have an additional and important one: **Community** (Image 2-3).

Image 2-3 The characteristics of historic residential block

The "community" could make the historic residential block different from the other parts of historic district. It means the historic residential block should have a certain number of families living there. They should have stable relationship and kind of common moral values with each other, and there could have formal or informal social organizations inside. The community might be a kind of certain life style contained in the residential block, and performed at their activities in street space of the historic residential block.

For example, the historic residential block - Linong-Tianzifang in Shanghai, it contains the special street space - alleyway (Image 2-4), part of this street is half-private space, people act a lot in these streets, it could provide intimate communicate space for residents. There has special traditional buildings like bridge - Guoqiaolou (Image 2-5), it’s built over the street and used as the connection of the buildings on the both side of the street. It could make full use of the
space above the street, and make people inside of house and act on the street communicate
with each other easily. Then among the special streets’ space created by the building, people
have very close relationship with other and there has a leisure way of daily life inside of this
historic residential block (Image 2-6).

Image 2-4: The alleyway

Image 2-5: The Guoqiaolo
The historic residential block has important historical and social value. In the historic district, although the historic residential block does not living as a core position in past (usually the core of the historic district might be historic commercial block - the economic centre, or historic culture block - the cultural/political centre), it is still a very important part of the historic district. The historic residential block has the largest area (In the historic district, the commercial block is the area on both sides of the main street, the cultural block is the place of schools and palaces. While the rest, where most normal people live are the residential blocks), carries the basic life style, and it could reflect the urban culture and local characteristics.

2.4 The value of historic residential block

The historic residential block contain material and spiritual elements that could reflect the city's historical characteristics. Feilden distinguishes among three different types of values attached to historical building: (Feilden, 1994)

(1) Sentimental value: Including the feeling of novelty, identification of a certain area, sense of religious worship, etc., act as a role of spirit and symbol.
(2) Cultural value: including the historical value, archaeological value, the value of historical architectures, etc.
(3) Use value: including the using function of historical buildings, the tour value of this area, etc.

Rypkema thought the value of the historical buildings in historic district could show on 8 aspects: economic value, social value, cultural value, aesthetic value, urban value, architectural value, historical value and public space value (Rypkema, 1992). Doratki, Hoskara, and Fasli also
thought the value of the historic district could not only reflect in the traditional buildings, the traditional characteristics displayed through the details are also very important (Doratki, Hoskara, and Fasli, 2004).

Also, the Chinese law for the preservation of antiques identifies 3 different values of historical district: (Standing Committee of the National People’s Congress, 2002)
(1) Historical value: It has a great memorial value of history. There have lots of real historical elements inside, a typical historical feelings there.
(2) Artistic value: the historical buildings, some special angle, even the whole area are full of beauty.
(3) Scientific value: the historical value and artistic value of the district are real, and they could go through the scientific research.

From the specific and material perspectives, Lu thought the evaluation of historic district should start from five aspects. They are the historical buildings, historical streets, municipal facilities, green space and water in the area (Lu, 2001).

Then, Shi and Liu discussed about this from nonmaterial and cultural perspectives, they thought, there are three approved standards of historic district - the authenticity of history, the authenticity of life and the scenic integrity. Also we should take into account the developmental and protective situation of the historic district (Shi and Liu, 2008).

The historical buildings are important part of historic residential block, and the historic residential block is a part of historic district, so, I think the value of historic residential block should consider both of them at the same time. The value of historic residential block could be: the use value, historical value and cultural value. further details are provided below.

(1) Use Value
In 1976, the United Nations Educational Scientific and Cultural Organization emphasized that one of the important values of historical heritage in the urban life is that it is useable (United Nations Educational Scientific and Cultural Organization, 1976). It should not be something that be simply isolated, but has certain functions, to make it useful. Feilden also thought the best way to maintain the heritage buildings is to use them properly (Feilden, 1994).

The basic value of historic residential block embodied in its use value, and the use value of this block is to provide living area. In order to restore the vitality of historic residential block, the key point is to maintain and strengthen its residential function, and then try to find out and add some appropriate functions at the same time. Such as small manual workshops, family inns,
senior citizens clubs, etc. The goal of protection and renewal is to make the historic residential block has vitality of development in the modern city. Therefore, the protection of historic residential block should not be simply segregating it from outside. In the contrast of monuments' protection, the use value of historic residential block is beyond its historical and cultural value. These two values are still very important, but if the historic residential block without living function, it's no longer residential block, it will be just a historical-building area.

The use is the purpose of protection, it's important to take full advantage of historic residential block for the demand of the people and society.

(2) Historical Value
In The Venice Charter, they thought if we want to protect a cultural relic building, it means we should also protect the environment around the building (The International Council of Museums, 1964). A historical building could not be separated from the history which it witnessed and the environment where it existed. Zhao thought that the destruction of historical buildings’ surrounding environment is like to pass a death sentence to this historical building (Zhao, 1998). Because the historical value is manifested as the value of a group, so it's not emphasized on a single building but the overall environment.

The historical value of historic residential block is the outward manifestation of it, we could see it and touch it directly. The protection of the historical value mainly refers to the buildings and the interface of constructions. Including the appearance, material, color, texture, etc. To create a complete and coordinated visual effects there.

(3) Cultural Value
The regional culture and community culture constitutes the important characteristics of historic residential block. Liu and Feng thought the existing living environment is not only the sum of a variety of physical objects, it contains the will of the residents. This kind of culture factors form as a kind of potential value (Liu and Feng, 2006). With the regional and traditional culture of China constantly being influenced by symbols, trends, cultures from other countries, we should pay more attention to the maintenance of traditional spirit and culture.

China's traditional living patterns are limited by the geographical, natural and cultural conditions, and present some clear geographical characteristics such as the quadrangle dwellings in Beijing (Image 2-7), the traditional neighborhood-Lilong in Shanghai (Image 2-8), the suspended buildings-Diaojiaolou in Fenghuang (Image 2-9). They all go through a long term of history, they are not only part of the scope of the buildings, but also become a symbol of historical culture. Different architectural form, spatial form, the surrounding environment, the
regional outlook and life style formed different modes of intercourse among residents, and
different characteristics of community structure.

Image 2-7: The quadrangle dwellings in Beijing

Image 2-8: Lilong in Shanghai

Image 2-9: Diaojiaolou in Fenghuang

Above all, the values of historic residential block are the motivation and reason for people to
protect and reuse them. Only when we could correctly understand and evaluate these three
values of historic residential block, could we help to realize the protection of culture and history
as well as realize the development of this area in the modern city.
2.5 Conclusions

One can thus conclude that, the specific design and implementation could begin from the following 5 aspects: (Image 2-10)

(1) Conservation and Utilization of historical buildings
Not only the valuable historical buildings, but also the normal old residential house should be well protected and reused, this is the basic requirement of the renovating project of historic residential block.

(2) Protection and re-shaping of public space
Due to the lack of management, many illegal buildings were built in the historic residential block over the years, it seriously affected the original public space. Therefore, in order to restore the public space, these illegal buildings in public space should be properly removed, and redesigned some part of the public space. Meanwhile, these illegal buildings are also the trace of a period, so, some of them could be kept or rebuilt into good construction quality.

(3) Updating the basic living facilities
The infrastructures in the old residential block are out of date and aged, they can't satisfy the residents' requirements of the modern and comfortable life. So, they should be redesigned and renewed. Such as the domestic sewage drainage system, natural gas system, and so on.
(4) Updating the function
Different functions of buildings could create different activities of people, so, In order to protect the overall atmosphere of the block, the block’s original functions could be properly saved. But, for the new requirements of modern people, some function could be added, such as outdoor gym, hotels, kindergarten, etc.

(5) Others
In addition to the above four points, the update and protection of historic residential block have lots of problems that require attention to detail. For example, the planning of the parking spaces, to make it convenient for the residents and at the same time could be able to avoid consume a lot of spaces.

And in this thesis, the discussion about the application of dynamic protection approach on historic residential block will also based on these aspects. I will discuss this further in Chapter 3.
Chapter 3: Research on Dynamic protection approach

3.1 The evolution about the protection rules of historic district

People have already realized the value of historical relics a long time ago, and act out the behavior of protection and collection. This is kind of commemoration and pursuit of a bygone era, cherishing and appreciation of the gone era objects. But in the past, this behavior is usually manifest in the artifacts of a single object, and does not involve the buildings and cities. European countries began earlier than others in the studying of the protective theories about historic district, then the United States, Australia and other countries were gradually started.

Considering the scope of protection, Zheng thought, the protection rules of historic district changed from "dot" to "surface"(Zheng, 2004). It means the protection of historic relics changed from "dot"- individual building into "surface" - the whole historic district. And Tan discussed about the change of the protection rules of historic district from another angle, about how did the protection rule act. So, as he said: it's changed from static protection to dynamic protection (Tan, 2006). It's about the results of historic area protection changed from categorical, isolated and museum-typed monument into associated, developed and sustainable area in the city.

I think, the protection of historical heritage could be considered as be expanded from "dot" to "surface", from protection of a single historical building or historical object, to the whole surrounding area. And then in the period of the protection of the whole district, the approach was changed from only think about the current situation there, to think about the future development of the area. The theoretical research on the historic district protection roughly gone through three stages: protection of single historical buildings - protection of objective historic area that using kind of museum-protection approach - protection of internal value of historic district that using Dynamic protection approach.

(1) The period about the protection of single historical buildings (from mid 1800's to 1930s)

In the mid-1800's, when Viollet-Le-Due presided over the restoration of the Notre Dame, he put forward a theory about the whole repairing of the historical buildings, the work about protection and restoration of historic buildings was gradually surfaced, people began to realize the historical building has irreplaceable values (Viollet-Le-Due, 1889).

Then, the administration of historic buildings was established in 1840, France, and enacted the law about the protection of Historical monuments and heritage in 1913 (Li and Wang, 2004).
William Morris and others founded an association about the Protection of Ancient Buildings in 1877, England (The Society for the Protection of Ancient Buildings, SPAB). They wanted to against the devastating maintenance of medieval buildings in Victorian England (Thompson, 2011). The protective decrees and standpoints of this period were focus on the historical buildings and other objects which have high historical and artistic value, such as the churches, temples, palaces, etc.

Then, by the influence from European countries, the protection of historic relics began earlier in Japan than other Asian countries. Japanese government legislated the Law for the Preservation of Ancient Temple in 1897; the Law for the Preservation of Antiques in 1902; the Law of Conservation of Historic Sites, Attractions, Monuments’, in 1919; and the Law for the Protection of National Treasure in 1929. And until now, all the laws about the historic area is focus on the individual building a or single relic.

(2) Change from the Protection of single historical building to the protection of historical area (from 1930s to 1960s)
In 1933, the CIAM (Congrès International d'Architecture Moderne) developed the first internationally recognized urban planning programmatic document: the Athens Charter, it's the earliest document that described the protection of historical buildings and historical areas (Li and Wang, 2004). It mentioned in Part VII, that the ancient buildings of historical value should be saved appropriately, and should not be destroyed (Corbusier, 1973).

In 1943, France enacted a law about the protection of the historic buildings' surrounding environment, it mentioned that people need to get special approval, if he wants to change the surrounding environment within historic buildings around 500m (Yao and Yi, 2010). It means, a historical building, once be approved, will be automatically generate a 500-meter radius' protective scope in the surrounding area, and the internal construction is under controlled.

In 1964, ICOM expanded the concept of historic buildings in the Venice Charter, and mentioned that the whole "Historic district" should be protected (I.C.O.M., 1964). The historical relics include not only the individual building itself, but also the urban environment that could bear witness to a civilization or the development of some particular historical events. So, the protection of historical relics and the environment should be considered at the same time, and a historical building should not be isolated from the surrounding environment. At this point, the important of the cultural environment's protection was widely known in the world.

Then, Japan began the stage of the protection historical district. Japanese government enacted the Law for the Preservation of Ancient Capital in 1966. So, the overall perspective of the
ancient capital should also be protected by this law. And the surrounding environment of the historical heritage as well as the whole area of the ancient capital have become the target of protection (Wang, 1987).

England promulgated the *City Livable Ordinance* in 1967, mentioned that we should protect the area which has particular architectural art and historical features. And the community value of the whole region should be firstly considered, including the building groups, outdoor space, street forms, etc (Xie, 2010).

In the period from the 1930s to 1960s, the scope of the protection of historical relics has been extended from the individual building to the overall architectural environment and the whole historical area. But they still mainly focus on the objective and tangible objects there, so the main protection approach was still kind of static protection approach, that the protection is to separate the object from the outside and then saved.

**(3) Generally changed into Dynamic protection approach (from 1960s until now)**

In 1967 through the Charter of Machu Picchu, that the protection, recovery and reuse of the existing historic sites and ancient buildings should be combined with urban construction process together, to ensure that these cultural relics could have the vitality of sustainable development (International Congresses of Modern Architecture, 1967). During the process of protection and renewal of historical areas, the use of well designed contemporary buildings should be take into account (Chen, 1979).

In 1976, the 19th Conference of UNESCO (United Nations Educational, Scientific and Cultural Organization) in Nairobi thought the historic area is a place which has a variety of culture, religious and life styles, and they should be continuing developed into future generations (UNESCO, 1976). It clearly points out the necessity of keeping continuity of historic area, and the basic elements of the urban planning and land development is the protection of historic area should be combined with modern social life together.

*The Burra Charter* in Australia clearly mentioned the measure about Adaptive reuse, namely, adjust the structure of some historical places to accommodate new functionality. This practice has not weaken the significance of culture of the place, but also could help to also provides the historic building and the whole area vitality again (Wang, 1999).

In the end of 1987, the 8th meeting of International Council on Monuments and Sites (ICOMOS) formally passed the *Washington Charter*. This charter tries to seek some approaches that could be used for coordinating private life with social life in this district, and encourages the
protection of cultural property (Legal Department of State Administration of Cultural Heritage., 1993). So, the protection of historic district should make the residents living there adapt to the requirements of modern life.

In this period, the protection of historic district not only include the protection of objective historic buildings and whole area, but also pay attention to the internal values of historic area. Such as the connection between the protection of historic district and the development of modern society life, the special urban culture there, etc. So the protection of historic district has no longer satisfied with the simple static protection approaches, dynamic protection approach would perform better.

Since the first law about the protection of individual heritage was established in 19th century in Europe, it has already developed for hundreds of years. With the development of modern city, living environment, scientific knowledge, etc, the protection approach has changed from isolated, static way to associated and developed. It's mainly displays in the following four points: (1) The protected object: expand from architectural heritage which has high artistic value and historical value in the past, to general construction remains which have historical and cultural elements inside right now. (2) The scope of protection: expand from protection of individual building in the past, to the whole historic district, surrounding historical environment, cultural environment, etc right now. (3) The protection approach: changed from purely archaeological approach and building restoration approach in the past, to comprehensive behavior that have multi-disciplinary participation and public participation approach. (4) The purpose of protection: changed from simple maintaining the stationary state of heritage buildings and historic district in the past, to update of the protected area, reuse of the old buildings, etc right now. In order to make the historic district full of vitality, to be suitable in the modern city.

3.2. Most common approaches to urban renewal

3.2.1 The Large-scale renovation approach in the western world

From 1850s to 1960s, the Urban renewal movement happened in Europe and America, the governments were efforts to restore previous situation of the city, when the city hasn’t be destroyed by the Great Depression and the two world wars, especially to solve the problem of the lack of houses. Therefore, the governments wanted to clear the slums in the city center, clean up the environment. Chen and Zhang thought the large-scale renovation approach was the main urban renewal method in this period (Chen and Zhang, 2004). In the USA, for example,
in the pre-war and after Second World War period, the local government was subsidized by the federal government to levy the land of slum. Then the government resold the land to developers at a lower price to do large-scale re-planning and reconstructing. A large number of old buildings in the city center were dismantled, and were replaced by a variety of modern high-rise buildings and service facilities (Garvin, 2002).

The renovation of Paris which was presided over by Haussmann from 1852 to 1870, is also an example about the application of the large-scale renovation approach. The radial street network was generated by the massive demolition and redesign of the old town by Haussmann in that period (Pinkney, 1972).

So, the large-scale renovation approach could be understood as, in a large-scale area, using a new form or function to replace the original things which is declining. This approach is often accompanied by historical reasons. Sometimes, this approach could make the city's old town re-flourish and re-develop rapidly.

Although the large-scale renovation could bring the prosperity to the city rapidly, after the 1960s, based on the reality that the city was developing rapidly and accompanied with lots of problems caused by the large-scale renovation approach, many scholars recognized that the large-scale renovation was a costly updating approach for the city, and the results were often difficult to meet the requirements of the citizens.

Mumford thought that the urban planning should be people-centered, and the dimension of the buildings and public space should make people feel comfortable. He was also strongly opposed to the urban renovation approach, which sought for large-scale and magnificent forms (Mumford, 1961).

Jane Jacobs thought the new and large-scale buildings and public space were tedious for people, and the urban environment lacked a sense of history and humanization. Also, due to a series of problems, such as the traffic congestion, environmental degradation, etc, which were caused by the high-intensity development of the city, the attractiveness of the city center was declining. Then, a large number of relocation of the residents further exacerbated the declining of the city center and even the entire old town. It brought a lot of social problems (Jacobs, 1992). So, the urban renewal movement caused a certain degree of the second destruction to the city.

Alexander thought the complex situation of city reflected the complexity of human behavior and deep-seated (e.g. spiritual) needs, it could also reflect the cultural value of the city (Alexander, 1965). The architecture design and urban planning should according with the
relationship between city and human behavior, but sometimes, the large-scale renovation would use a unified physical planning to negate the value of urban culture, and make the urban functions separated from human need (Alexander, 1965).

Alexander, Silverstein, Angel, Ishikawa and Abrams also thought, the large-scale renovation could ignore and destroy many messy but valuable things, and lead to the loss of pleasant environment in the city. So, they suggested the designers should also pay attention to the protection and renovation of the endangered damaged part, while they focused on the integral part of the city (Alexander, Silverstein, Angel, Ishikawa and Abrams. 1975).

Based on the long-term observation in the developing country - India, Schumacher thought, the people have already tested the bitterness of widespread blind worship of the large-scale buildings or space, so urban planning should emphasize using small-scale updating approach in small-scale area. The urban design should firstly consider the needs of people (Schumacher, 1993).

3.3.3 The Large-scale renovation approach in China

In 1990s, with the rise of the real estate market, the climax of the large-scale construction of the old town was set off in China (Ruan and Sun, 2001).

The old town was the residential center and economic center, and it's still a very central and important part of the city. It has a very good locational advantage, almost all of the real estate agents want to have the right to exploit this area. Meanwhile, the living condition in the old town are terrible, the residents have an urgent requirement of change or moving out.

Xiang argues that the large-scale renovation was lead by the strong will of government or developers. This strong will would often bring a variety of problems, such as ignoring the requirements of the residents. So, the large-scale renovation is not a suitable protection approach of the historic district (Xiang, 2010). Xiang also agreed with Alexander, Neis, Anninou and King, that urban renovation should start from a small-scale area, and try to transform it step by step (Alexander, Neis, Anninou and King, 1987). Because of the small scale, during the renovation process, the problems could be found timely and solved easily. This is beneficial to the transformation and protection of old town.

In the rapid economic development areas, the real estate developers are easily influenced by market efficiency demands, they hope to be able to gain maximum benefit in a short time, and they pursue the high plot ratio of buildings. They do not consider the protection as the premise of change and updating, they treat the protection of existing neighbourhoods, buildings,
districts, as a burden and stumbling blocks on the way of the development of the old town (Jiang, 2008). So, in the transformation of the historic district, they promote using the large-scale renovation approach, and resulting in the prevalence of large-scale demolition and construction of the historic district.

Due to the requirements of the Government Performance Project, which recently refers to the project, that pursued by some government leaders who want to pursue recently effects and rapidly individual promotion, and it could be finished quickly and have exterior success of it (Mo, 2006). Some government leaders want that everything could be done as soon as possible, so they use the name of protection and renewal of historic district on cover, and undertake the large-scale business development in the historic district.

Take the renovation of Sanfangqixiang district in Fuzhou, China as an example. There used to be a large historic residential district in the old city town, the reconstruction project of this area was unduly emphasis on the commercial profit. In the end, only the listed buildings have been well retained, and the rest have all been dismantled. Then the developers built some high-rise buildings close to protected area (Image 3-1), and a big shopping mall at the center of this district, changing this district to be one of the biggest tourist center and shopping center in the city (Image 3-2). These would bring great damage to the original style and traditional social structures in this district.
Lots of historic districts in China are rapidly disappearing, especially pieces of traditional residential houses, small handicraft shops, such as the Hutong in Beijing, the Shikumen residential block in Shanghai.

As a conclusion, I think the advantages of large-scale renovation can be summoned up by 2 aspects:

(1) The renovation is rapid and effective.
The large-scale renovation can complete the transformation of the city's old town in a very short time. It can solve the problems of lack of infrastructure and housing conditions in the historic residential block rapidly and effectively. The large-scale renovation can help to create a modern and comfortable living environment in the historic residential block rapidly.

(2) It can meet the requirements of China's government.
Today, the urbanization in China is developing rapidly. In order to quickly advance the urbanization process and highlight the achievements of the modern development of the city, the government is keen on the large-scaled urban development patterns.

But, there are also disadvantages to the large-scaled renovation, mainly manifested in the following aspects:

(1) The large-scale renovation approach is simplistic
Large-scale renovation of historic residential block usually rely on a huge amount of investment in real estate, the developers always want to recover the huge investment cost as soon as possible. They also ask the designers to finish the planning of the block quickly, so, the designers do not always have time to make the plan well. At the same time, some government leaders lack of the knowledge about the renovation of historic residential block, in the face of
complex problems, they treat the context in a simplistic and blind way. Simplistic treatment can miss the protection of the original cultural characteristics and historical atmosphere in the historical residential block.

(2) The large-scale renovation approach lacks flexibility
A main approach of large-scale renovation is one-time overthrow reconstructing. Therefore, the renovation does not include time for flexible adjustments and amendments during the renovation process. Moreover, the investment of large-scale renovation is usually a one-off investigation, so after the completion of the project, even in the presence of a variety of problems, it is difficult to have adjustment in the short term.

(3) The styles created by large-scale renovation are similar
Because of the developers always want to recover the huge investment cost as soon as possible, the designers and constructors don't have much time to do the project. This results in the mechanically design and a large amount of standardized buildings applied in the renovation of historic residential block. This is likely to lead to the renovation of historic residential blocks during the same period, often similar in style. This makes the city tedious, and also the history, heritage and culture of the historic residential block might completely disappear.

(4) Waste of resources
Huge amounts of money spent during the large-scale renovation of the historic residential block, but the money for ordinary residential construction and improvement of the quality of the living environment is very limited, most of money were lost in the tedious process (Liu, 2009).

At the same time, for construction convenience, consistency indiscriminate historic buildings in the historic district pushed to reconstruction. In fact, some buildings are still in the normal period of use, lots of them could still be used as business or residence after being repaired. Large-scale demolition and construction led to a large number of redundant constructions, and not only waste a lot of manpower and material resources, but also cause serious damage to the natural environment and ecological resources (Jiang, 2008).

(5) The destruction of social life
The community in the historic residential block formed in a long historical process. For the original inhabitants, the historic residential block is the material basis for survival. It is inevitable that the large-scale renovation approach would relocate the original inhabitants in the historic residential block, resulting in the loss of the original inhabitants. Then, the long-standing mode of relationship and social life among the inhabitants would be destructed.
At the same time, the complex socio-economic structure of the historic residential block, which provides the working environment and diverse revenue streams for all walks of life in the block, is destructed during the large-scale renovation process. Large-scale demolition and destruction of construction in the historic residential block resulting in many of the old commercial shops removed from the original site, some even disappear forever. Lots of residents lose jobs, and it makes the block lose public identity, and become more and more depression. The former bustling block would gradually become bland and boring. For the economic and other interests of the temptation, the government often become the booster of demolition, exacerbated the social injustice.

### 3.2.2 The static protection approach

In the end of the 19th century, the France architect Viollet-le-Duc advocated using stylistic restoration approach for the protection of historical buildings. Striving to fully restore the original style in the past. Xiang thought this approach could be considered as one kind of typical static protection approach, because this approach focus on some single historical buildings, and the key point of this approach is to make the historical buildings keep the existing appearance (Xiang, 2010). However, many historic districts have been built into the Republic of China’s style in recent years. Such as the famous Xintiandi historic district in Shanghai (Image 3-3), the 1912 historic district in Nanjing (Image 3-4), etc. I think the reason is when designers want to restore historic buildings, they tend to choose the style of a period that, they believe could found the most characteristics of this period that appear on the buildings. However, the Republic of China period is the nearest historical period until now, in China. The characteristics of this period could mostly remain in the buildings.

![Image 3-3 Shanghai Xintiandi](image3-3.png) ![Image 3-4 Nanjing 1912](image3-4.png)

The standard about the protection of historic district in China is formulated based on the *Law of the People’s Republic of China on the Protection of Cultural Relics*, and the cultural relics mentioned in this law mainly refer to the single historical building, historical architectural
complex which have similar function, traditional park, etc. Therefore, by the impact of this Law, currently, some planners, government, and the residents in China generally agreed that the protection of the historic district is the protection of a historical building, architectural complex and the traditional parks in an area.

The protection approach of cultural relics mainly use the static protection approach, it is also being applied to the protection of the historic district. In China, under the guidance of the static protection regulations, the government keen on the repair and reconstruction of the monuments and relics, which are very famous and valuable in the historic area. But they always ignore the ordinary residential buildings and the cultural elements in the district. The historic residential blocks are simply tore down or rebuilt out of accordance with original function and design.

Tan argues that the static protection approach mainly refers to the absolute protection of the historical buildings, archaeological sites, ancient tombs, cave temples, rock carvings and other artifacts. This protection approach focuses on the style and features of historical relics, but when it is applied to the protection of historic residential block, sometime, it would simply focus on the form of the historical buildings and ignore the revival of the whole block (Tan, 2007).

Zheng thought, the static protection approach including the limitation of the building volume, style and form, it's unilateral focus on the protection of the physical elements in the historic district, ignoring the historical culture, public space and the spirit of historic area (Zheng, 2004). This static protection approach doesn't pay enough attention to the renewal and development of the historic district.

I think the static protection could be summarized as: the static protection approach mainly uses strict controlling measures (such as restrictions on the building height, architectural style, form, etc.), in order to protect the inherent and original historical style of monomer historic buildings, groups of buildings, or famous historical gardens.

Therefore, I think the static protection approach is useful for the protection of cultural relics, and it might be suitable for the following situations:

(1) The static protection approach could be applied to the protection of precious historical relics, such as the the Colosseum in Roman, and the Parthenon Temple in Athens. Although the function of these sites has been changed to tourist attractions, and the relics themselves don't have specific functions, they have been protected, don't randomly use modern stuffs to destroy them, and maintain the historical authenticity of them.
(2) The static protection approach could be applied to the historical landscape or garden which has some special meaning in the past, such as the protection of YuanmingYuan Ruin (also known as the Old Summer Palace) in Beijing. Some designers have proposed to repair the Yuanmingyuan, but in the end, taking into account its special historical significance - it's an evidence of aggression, has special educational significance - to educate people don't forget the terrible period from 1840 to 1949. So, the protection of Yuanmingyuan Ruin is still using static protection approach, and the time in the Yuanmingyuan seems to be frozen.

(3) The static protection approach could apply to the valuable historic buildings. In order to save the most emblematic historical buildings, the designers always use static protection approach to protect them. For example, the protection project of Hanshan Temple in Suzhou, it was built in Liang Dynasty (AD 502-519), and in order to preserve more than 1400 years' historic scene of it, the designer use the static protection approach to protect it, and the Hanshan Temple still retain the function as a temple.

But, the historic residential block doesn’t only consist by the historical buildings, and it's not static historical relics also. The historic residential block is not only cultural remains, but also a complete and vibrant community. There are tens of thousands of households that live in this kind of region all over China. So, the historic residential block is a very complex objects, cannot simply be protected by the same protection approach as the protection of the cultural relics. Sometimes, the static protection approach doesn't treat the historic district as a whole, rather than several historic buildings, and the historical culture is easily ignored during the protection process. Furthermore, the static protection approach is limited to the protection of past, and ignore the relationship with the development of the historic district and the whole modern city.

Additionally in the Law of the People's Republic of China on the Protection of Cultural Relics, depending on which historical period they occur, the historic relics are divided into 5 levels. For example, the relics in the first level should be before South and North Dynasty (AD 589), and the relics in the Fifth level should be before the founding of new China Dynasty (AD 1949) (Xie, 1990). And due to the development of the city, many existing historical residential buildings were not built very long time ago, some of them are in the 5th level, some in the 4th level, and even some of them are beyond the scope of historic relics

Due to the impact of relics' preservation, and mainly according to the existing time of the historic buildings in the district, the static protection approach divides the historic districts and the historic buildings in the district into different levels also. Therefore, when the government or designers try to protect and renew a historic district, the first thing they consider is the
rehabilitation of the important and high level historical buildings, but ignore the normal residential buildings, which are in urgent need of renovation (Zheng, 2004). In Beijing, for example, the ancient capital part of Beijing consists of two parts, one part is the Forbidden City and a group of former imperial gardens, the other part is a piece of folk architectures which are made of Hutong and quadrangle dwellings. The government pays high attention to the protection of the Forbidden City, and it’s been well protected. But a large number of folk buildings in Beijing is lack of repair, and lots of them were removed during the large-scale urban development.

And in the protection of historic district, some government departments not only blindly use the static protection approach, but also, if the real "monument", which is a higher level historical relic, has already disappeared, due to the requirements of the Government Performance Project, some government leaders often want to build a fake "monument". For example, a few years ago, the government rebuilt the ancient Huaiyuan Gate (Image 3-3), they posted white tiles on the outside surface of the restored Huaiyuan Gate, it makes the gate neither fish nor fowl.

![Image 3-5 the Huaiyuan Gate](image)

Overall, in the protection of historic residential block, using the static protection approach often appears in the following 4 situations:

(1) The designers and implementers would emphasize on the protection of tangible objects, such as historic buildings, relic, etc, but **ignore the protection of intangible resources**.

(2) When the designers and implementers focus on the protection of historical buildings in the historic residential block, they may **misinterpret the protection approach for historical**
architectures. Sometimes, if some valuable historical architecture in the historic residential block has already missing, sometime, the designers tear down something they treat as valueless, and build fake antiques there. Some real historical buildings are destroyed at this time.

(3) The designers and implementers would ignore the low value historical buildings during protection process. Most of them are residential buildings, which built a little late, but they are very important part of historic district. But, these buildings are always demolished during the protection process, and isolated protect the higher level historical buildings. It would destroy the overall style of historic residential block, and the sense of public space would disappear.

(4) The static protection approach asks for the strictly reflection of the original style in the historic residential block, any change is not allowed there. Although this is very good for protecting the historical buildings, if they take into account the "protection" and disregard the future development of the historic residential block. Then the block would become a "Monument", which only be used as a place for people to "watch", without "use". This makes the historic residential block break away from the ongoing modern city, and become an isolated island, and can lead to the final decline of the historic residential block.

If the designers consider the protection of historic residential block only as several designate areas, several determined protection point or line, this could only make the entire district be separated. The historic residential block is a lively area, which is always in the dynamic development, and changed with the development of the modern city. If the historic residential block left of human events, it would become a relic, and lose the role as a community. It is necessary to seriously study the formation history and current situation of the historic residential block and the role of today, and the development of the area in the future should also been considered

3.3 The dynamic approach

3.3.1 The definition of dynamic protection

The development of the dynamic protection about historic district in China has experienced a long process. The idea of dynamic protection first appeared in 1950, in the proposal about the protection of Beijing's ancient city, by Liang Sicheng and Chen Zhanxiang. They used put forward such an idea about the ancient city walls of Beijing: "Today this wall has become a historical relics...there will be an excellent people's park above the wall, people is able to take a walk, enjoy the cool, reading, look around the place, etc. Based on the need of transportation, it could open the gate below" (Liang, 1950). To update and reuse the walls of Beijing and try to
meet the demands of modern function, this is the preliminary reflection of dynamic protection in that period. Although the plan finally was not carried out, the idea of dynamic protection took root in the heart of the other designers.

The research of the dynamic protection is mainly conducted through the investigation and research of concrete cases. Dynamic protection began to systematic come up was in 1993, in *the Masterplan of Beijing (1991-2010)* by Beijing Municipal Institute of City Planning & Design, highlight and clearly reflects the "Dynamic and Overall Protection" principle, and obtained the approval of the State Council. This principle means, designers should consider about controlling the dimension and scale of new buildings, at the same time, keeping the dynamic development of the historic blocks. And the idea "Small Scale Transformation" presented later is the reflection of this planning approach on real cases.

After that, research using the dynamic protection approach developed quickly. For example, on the dynamic protective planning of the North and South Long Street historical blocks in Beijing by Beijing Municipal Institute of City Planning & Design, they considered the dynamic protection as a kind of microcirculation. They thought the protection of historic residential block should be started with small parts (Song, 2000). For example, the update should begin with a single building, after it finished, we could wait for a few time to check whether this kind of change is good or not. Then, we could go on with another part. We could have a overall planning in our mind, but just start from small parts. But the limitation of this approach is it goes too slow to the people who wants to change their living situation, and not suitable enough for the government's policy.

The dynamic protection approach of historic blocks can also integrate the idea of sustainable development. On this basis, some researchers put forward the concept about Dynamic Protection of historic blocks (Tang, 2003). Tang thought the protection of historic district should be sustainable, overall considered, and it will be a long-term work of the area. In order to achieve this goal, she thought the dynamic protection of historic blocks should focus on the protection of buildings and street pattern, the regulation of the building height and scale, the transformation of infrastructure, the adjustment of resident population, life style and function, etc.

Summing up, the **dynamic protection of historic residential block** means, in the planning of historic residential block, that researchers and planners should analyze the block with the historic-current-and future situations together, and try to meet the requirements of the residents and modern city. We should clearly notice the relationship between the development
of city and the protection of historic residential block. Specifically, we should consider about the protection of historic residential blocks and the development of the rest of the modern city synchronously. According to the situation of historic residential block itself and the specific situation of the city, we should adjust measures to local conditions and keep pace with the times to determine methods to ensure that the historic residential block maintains the authenticity of its history, while at the same time, promoting its integration into the urban modernization development with renewed vigor.

3.3.2. Analysis of Dynamic protection approach

Specifically, it includes the following aspects:

(1) The Scope
The scope of dynamic protection is not limited to tangible heritages of the historic residential block. It also includes the history, culture, life styles and other intangible cultural heritages.

(2) The Approach
The dynamic protection approach emphasize on the sustainable, organic and small-scaled progressive protection and renewal. The protection and updates should be considered at the same time. For instance, the renewal and completion of infrastructures, the transformation and reuse of the historical buildings for according with the requirements of modernization.

(3) The Goal
Through the renovation of historical buildings, integration of urban space and regulation of environment in the historic residential block, and then inject some new elements, to make the historic block restore the vigor and vitality, to achieve sustainable development and rehabilitation of the historic block.

During the process about the dynamic protection approach implying to the historical residential block, we need to consider the following aspects:

(1) Wholeness
The historic residential block is formed during the process of the city's long-term development, including the historical buildings, its surrounding material or non-material elements as a whole. So, when the designers want to use dynamic protection approaches to protect and renew the historic residential block, we need to think about it comprehensively.

(2) Flexibility
The historic residential block is a lively area, it develops and changes constantly day by day. The protection approach should keep adjusting and optimizing to meet the requirements of the modern city, as same as when designers use dynamic protection approach. During the process
of dynamic protection, it should be flexible instead of unalterable. In order to find problems in time during the transforming process, and timely adjust them. Under the requirements of the wholeness, the dynamic protection approach should be small scaled and update step by step. Combining with the actual situation, it should avoid large-scale demolition and construction, to operate flexibly.

(3) Public participation
During the renewal process of historical residential block, the designers should consider the activities of the residents living inside. For example, designers need to take full account of the activities of residents' daily life in the neighborhoods, and their requirements of the public space. The renovation of the old buildings should consider the actual needs of the users. While the developers or government transforming the historic residential block, the residents should be given the right to know about it, and the right to participate inside.

(4) Diversity
According to the characteristics of the historic residential block, the architectural forms are abundant, the functions of buildings and public space are diversity. So, when designers use dynamic protection approach to update this kind of area, they should pay attention to the protection of its diverse characteristics. It requires the designers use different methods for different area during the planning and implementation process.

3.4. The approach of Dynamic protection applied to the renewal of historical residential block
The dynamic protection and renewal of historic residential block include two aspects: "protection" and "renewal". Deng thought, the "protection" including the protection of historical buildings, surrounding environment as well as the traditional characteristics inside. "Renewal" refers to the changes on the block, that is, in order to adapt to requirements of the modern city (Zheng, 2004). Such as the adjustment of some buildings' function and the improvement of infrastructures, which are in order to improve the living condition and the quality of the surrounding environment.

Li and Ding thought, the key point of the dynamic protection of historic district is the dynamic protection of the "Hardware" in the block. The "Hardware" refers to the buildings, infrastructures and other physical entities in the historic district (Li and Ding, 2003). In order to meet the requirements of social development, the function of the historic residential block should be adjusted, the infrastructure and the living environment should be improved. The
dynamic protection approach ask the protection of historic residential block should focus on the renovation of the hardware facilities in the block, and try to make the block full of developing momentum, or the historic residential block would decline.

Xiang stressed that the protection of the historic district should not ignore the dynamic updates of historical buildings. He thought, the historical buildings and other historical heritages are not only the carrier of the historical culture, but also they have value in use. The function of historical buildings would constantly update and change with the passing of the time (Xiang, 2010). Therefore, proper use and transformation of the historical buildings would not only contribute to the implementation of the protection work of historic buildings, but also make the buildings to regain new vitality, and to maximize their value of use.

Lu pointed out that the culture value should not be ignored during the dynamic protection process of historic residential block. He thought, the protection of the culture in the historic district is not retro. The original cultural tradition is formed in history, and there must be part of them have already developed and changed in modern society (Lu, 2004). So, the protection of cultural value in the historic district should not completely copy the cultural traditions in the past, but should provide a platform for the development of cultural traditions.

In the application of the dynamic protection approach, scholars have highlighted that importance of carefully considering: the protection of historical buildings, the protection of public space, the improvement of infrastructures, the protection of historical culture, the protection of natural environment, the adjustment of building functions (Liu, 2009; Tang, 2003).

In my opinion, in the historic residential block, the dynamic protection of historical buildings should include the appearance and function of the buildings. The public space between buildings would impact the residents' daily activities. I will dedicate special attention to these aspects in my design proposal. As for the infrastructures for the whole district and inside of the buildings, I recognize that they play an important role in the living quality, influencing whether residents want to live here or not. But because of the limitation of technical information that I can access at this stage, this will be simply introduced in the case study and addressed in the design. The protection of historical culture will reflected in details, including the buildings, the public space, featured landscapes, etc.

So, in this paper, the design proposal of the historic residential block in Xijindu district will focus on the dynamic protection of historical buildings, public space, historical culture inside.
3.5 Conclusion

The structure and conclusions of this chapter has been clearly summarized in Image 3-4 below.

Image 3-6 Conclusion and structure of Chapter 3
Chapter 4: Methodology

In order to discuss how would the dynamic protection approach work on the Chinese historic residential blocks, I will take the design of Xijindu Residential district in Zhenjiang as an application case. This will be my case study, and I will do detailed analysis and design proposal applied to it. In this Chapter, I will discuss the reason why I choose a case study approach for the further analysis of the dynamic protection approach, how I collected the data to inform my case study and my design proposal, and how I analyzed the data..

4.1. Reason for a case study approach

Stake thought, the case study is the study process of a single event that happened within particular conditions or particular circumstances (Stake, 1995). Thomas defined the case study as the method or methods that could be used for holistically studying events, persons, projects, etc (Thomas, 2011).

Yin believed that the case study is an empirical inquiry, which could be used for studying a contemporary phenomenon in the context of real-life. Obviously, in the context of such a situation, the boundaries between the context and phenomenon are inconspicuous, so, researchers should extensive use the cases for study (Yin, 1994). This means, for example, when I want to study about how could dynamic protection approach work on the conservation of historic residential block, which is to study the phenomenon happened in the block that caused by dynamic protection approach. This phenomenon mostly in the context of real-life, in order to study it, I need use cases for study, to show what would really happen in the block by the dynamic protection approach.

I think the case study is an approach that is better suited for studying a phenomenon in a specific situation. Specifically, in this paper, by the research on the phenomenon before and after conservation in Xijindu historic residential block, I could discuss about the impact of the dynamic protection approach that I used to lead to this kind of change. Therefore, the case study could be used for discussing about whether the dynamic protection approach could be applied on this kind of historic residential block in China or not, and then I could try to figure out the advantage and disadvantage of the approach.

In this paper, as I mentioned in Chapter 1, one of the research questions that I should answered is "How can the Dynamic Protection approach benefit the renewal of the historic residential block and make the old living areas become full of vitality?" In order to answer this question, I
have already done the analysis and research of the dynamic protection approach and the historic residential block from theoretical aspect in Chapter 2 and Chapter 3.

Furthermore, I need to think about how could the dynamic protection approach works in reality, especially about how to use dynamic protection approach to solve the problems of the historic residential blocks in China. This requires that I should try to apply dynamic protection approach in protecting and renovating a specific historic residential block in China. Then I could further explore the specific methods about the dynamic protection of a historic residential block, and discuss the advantage and disadvantage of dynamic protection approach using in reality. Therefore, I think the case study approach is a very suitable method.

Additionally, the case study approach should be understood and applied from 3 aspects: Firstly, the case study is a kind of empirical study, rather than a purely theoretical one. Just as Yin said, the significance of the case study is to answer the question with "why" and "how", rather than "what should be" (Yin, 1994). So, in this paper, based on the case study I would answer my research question about how could dynamic protection approach be applied to the renewal of a historic residential block. And how would this approach benefit the renewal of the historic residential block.

Secondly, the case study should focus on details. Sturman thought that, if the researchers wanted to draw inductive conclusions by case study, they should have an in-depth study of various parts that involved in the incident and be aware of the relationships between them (Sturman, 1994). So, in this paper, in the case study part, I do a specific analyze of the historic residential block in the Xijindu District, including the analysis of the buildings, the streets, the public space, the historical culture inside, the location, etc.

Thirdly, the case study requests a holistic thinking of an overall perspective, meaning that the study should be based on the analysis of the real situation of the place where the phenomenon occurs. As well as the case study in this paper, all the analysis and discuss of the case are based on the overall situation of the Xijindu District in Zhenjiang, China.

**4.2. Reason of choosing the case -- design of Xijindu Residential block in Zhenjiang**

When I decided to use the case study approach as analytical research method, I was thinking about how to choose the case that I need. Firstly, in order to make the case study to better suit my intentions for the study, the case must fit the content and research direction of this paper.
Secondly, because I need to carry out in-depth research and analysis of this case, this case must be somewhere I am very familiar with.

I choose the design of Xijindu residential block as an application case for 3 reasons:
Firstly, the historic residential block in the Xijindu historic district is a traditional residential neighborhood, it could meet the requirements of the study in the paper. The Xijindu historic district has over 2000 years of history, according to the size of different areas, the historic residential block is the biggest part in it, and then the historic commercial block, followed by the historic cultural block. The block I choose for case study is in the historic residential block, which is mainly formed by residential buildings.

Secondly, due to the historical reasons, the architectural forms in the Xijindu district are very abundant, and they composed different types of public space there. The edge of historic residential block that I choose for case study was constituent with different types of construction, for example different shops, factories, a museum, etc. This block has strong research ability, suitable for exploring about how to use dynamic protection approach to solve the problems in a complex historic residential block.

Thirdly, Zhenjiang is my hometown, it only takes 10 minutes drive or 30 minutes walk from my home to Xijindu district. I visit Xijindu district very often since I was a child, I am very familiar with the history, the street, the living condition, etc in the district. This is helpful to collect and analyze the relevant data in the case study.

For these reasons, in this paper, I will choose the residential block in Xijindu district to make a detailed analysis of the content for case study, and complete the design proposal, to support the research of the application of dynamic protection approach on the historic residential block.

4.3. Collection and analysis of the data

In order to have an in-depth analysis of Xijindu district and the historic residential block inside, I should collect the relevant data before doing the case study. Data collection and analysis includes the following aspects:

(1) I collected the data about the historical development of Xijindu district. The history and culture inside make the historic residential block different from other residential blocks. The collection of these data was mainly based on the information that provided by the Xijindu official website (http://www.xijindu.com.cn/index.asp) and some papers that write about analysis of the history in Xijindu district. I mainly use reading and summarizing ways to analyze
these data, it helps me have a comprehensive and in-depth understanding of the district’s history and culture.

(2) I collected the data about the current situation of Xinjindu district and the surrounding area, including the population, environmental condition, traffic condition, etc. This information includes the specific data and the pictures, and they are mainly from the Xijindu official website and blogs, and some research papers about the current situation of Xijindu district. Some photos were taken by myself at the time of the survey. These data are the basis of the continued analysis and design proposal.

(3) I collected the data of the design site, such as the maps, width of the road, building floors, function of buildings, photos of the current situation. The maps are mainly based on the information that provided by the Xijindu official website, and some maps come from website (http://maps.google.com.hk, http://maps.baidu.com). Then, the data about the width of the road, building floors were recorded by myself during the investigation. The collection and analysis of these data will help me recognize the public space, architectural forms of the block. The functions of buildings in the design site also recorded under my on-site visit. Then, in order to have a direct understanding of the current situation, architectural style, street space, construction materials of the design site, I took lots of photos of the buildings, streets, green spaces, etc in the area. Also, some pictures were reference to related websites and literatures.
Chapter 5 Case Study

5.1 Introduction to the site

5.1.1 Location

The study area is located in the Northeast of Runzhou District, and it is a historic residential block in the Xijindu historic district.

The Xijindu historic district had formerly an important ferry in the lower reaches of the Yangtze River. Then, after the Grand Canal from Beijing to Hangzhou opened up in 610, Xijindu was in the interaction of the Grand Canal and Yangzi River, and it became a water transport center in the city. But, after all these years of change, nowadays there is only a small branch of the river passing in front of this area (Image 5-1).

This district was considered as the city center in the past, and although it is no longer prosperous in present days, there is still great potential for development. The new city center is located south of this area. The study area still has a very good location (image 5-1).
The study area is approximately 1.6km away from the Zhenjiang First People’s Hospital, 2.2km away from the train station, 2.5km away from the city center. It will take about 30 minutes to reach these places on foot, and less than 10 minutes to get there by car. Also, the study area is only about 4km away from the Zhenjiang municipal government, and 11.6km away from the Jiangsu University, no more than 25 minutes drive away from there. Therefore, it's very convenience for the residents that live in this area to get around, go shopping, reach the hospital, etc (image 5-2).

Meanwhile, the study area is very close to the famous parks in Zhenjiang. Approximately 1.9km away from Jinshan Park, 3.2km away from Beigushan Park, 6.3km away from Jiao Shangong Park, 4.4km away from Nanshan scenic area. They are all in 15 minutes' drive range. Residents living in the area thus have different recreational areas within convenient distance (image-5-2).
5.1.2 Main function of each block in Xijindu historic district and surrounding area

In the Xijindu historic district, the north part (A) (Image 5-3) used to be the commercial block and cultural block along the ancient ferry. In recent years, some of the historical heritage and buildings have already been protected, and the block has been renewed and became a new tourist attraction and commercial area. Due to the transformation of this area, it has great attraction for the developers and investors to invest in and transform the old residential blocks in the surrounding area.
At the time of the survey, I found the Zhenjiang Museum area, which used to be British Consulate (C) (Image 5-3), is being refurbished. The area which is close to the train station and city center, has already been transformed into modern communities. Furthermore, parts of the historical residential blocks have been demolished (B), and some modern communities are under construction in the surrounding area (Image 5-4).

There is only a small remaining area still keeping the original historical residence as the neighborhood character (D). These historic residential block should not be simply removed, and then rebuild the area into a modern community with high-rise buildings. The transformation of these blocks should consider the protection and development together. In this paper, I will choose the part of these historic residential blocks for detailed analysis and design proposal.
5.2 Analysis of the site and surrounding area

5.2.1 Road Network

The road network in this district is mainly consists of the peripheral main roads and internal branch roads (image 5-5), and only these roads have car traffic. The main road has two wide motor lanes of each direction (Image 5-6). The secondary road has two narrow motor lanes of each direction (Image 5-7). The branch road has one motor lanes of each direction (Image 5-8).
Therefore, there only a few branch roads in the historic residential area allow driving, and inside
of these residential blocks, the streets are not open to the car, and people can walk or go by
bike. This also makes the residential area become quiet and increases the traffic safety of the
neighborhood.
Zhenjiang is a small city without metro, and the bus is the main public transportation in the city. There are many bus lines passing this area (Image 5-9) and this helps people to conveniently reach different parts of the city by bus. It also includes the intercity bus between Zhenjiang and Yangzhou. The bus stations are mostly on the main roads and the branch road that go through this district.

The current situation of bus lines in this district shows that this area has close connection with the city center, main hospital, main parks, etc (Image 5-9). There are multiple options for the residents in this area, and the bus stations are distributed densely, it could meet people's requirements of daily travel.
There are 3 bus lines in this district could reach the train station (Image 5-10). Bus 17 and bus 123 go directly through the main road to the train station, and are very fast. Bus 2 have a big detour in the city center before go to the train station, and it takes about 40 minutes, it’s even longer than if people walk to the train station directly from the area.

However, from the perspective of the distribution of bus stations, we can see that only the bus 2 goes through this district, and has stations near the residential blocks. The bus 17 and bus 123 have a convenient route, but the bus stations are far away from the area, and it takes about 15 minutes by walk. Therefore, it’s not convenient enough for the residents in this area to go to the train station by bus.
5.2.3 Green Space

There are many parks and public green space nearby (Image 5-11), most of them are within the scope of the bus accessibility distance. And some of them are within walking distance, such as the Boxian Park, Baogaishan Park, and the riverside greenbelt. These green spaces provide a good ecological environment to this area, and also provide the residents a nice place for entertainment in the leisure time.
5.2.4 Surrounding public facilities

Zhenjiang museum and the Chamber of Commerce's office are located in the west of the study area (image 5-12). The northern part of the study area used to be part of the old town, but now it has been demolished, only a traditional Chinese medicine shop and a historical value restaurant were preserved. The east part is the old city center, and it still retains some old shopping malls, pharmacies, banks, supermarket, farm product market etc. There we also find a kindergarten, supermarket and a drugstore settled in the south.
5.2.5 Photos of surrounding area

A: The new historic tourist center in Xijindu historic district.
B: The traditional Chinese medicines shop.
C: Part of the old city shopping center.
D: Another part of the historic district, the shops along the road have been renovated.
E: Zhenjiang Museum.
F: Zhenjiang chamber of commerce's office building.
G: Old factory building - empty right now.
H: New modern community building nearby.

5.3 Conclusions

Overall, this residential neighborhood in Xijindu historic district has the characteristics of the historic residential blocks, that have been discussed in chapter 2, such as: community, significance, scale, representative, diversity, etc. These characteristics are mainly shown in the following aspects:
(1) The residential neighborhood is part of the Xijindu historic district, there are lots of
registered historic preservation buildings in the residential blocks. The building form, street structure, etc still maintain the traditional style. It has historical significance.

(2) The residential neighborhood contains a large number of buildings inside and the area has a certain scale.

(3) The majority of the buildings in this neighborhood are inhabited and people have close neighborhood relations with each other. It contains the characteristic of a community living there.

(4) There are not only residential buildings in this area, but also contains other functions, such as the manual workshop, small restaurant, which makes this area full of diversity.

(5) These characteristics makes this area could distinguished from the modern communities in the surrounding area, and have its own individuality.

Additionally this area also has development potential to adapt to the development of the modern city and some features make this area suitable for living. Such as:
(1) Good location: The study area used to be the city center, and it still has very good location, being close to the city center, train station, main hospital and other services and institutions in Zhenjiang.
(2) Convenient transport: The buses that go through this area could let the residents reach most parts of the city conveniently
(3) Good surrounding environment: The residential blocks are away from the main roads, which grant the study area with a quiet living environment. As well as the surrounding green spaces could provide good ecological environment to this neighborhood. Furthermore, the study area is close to the museum.

However, as an old residential block, there are a lot of problems in the study area:
(1) The bus lines that reach the train station are not very convenient.
(2) The buildings are old and could not meet the requirements of the residents for good living condition.
(3) This area lacks public space, the place for communication and activities among the residents. The narrow streets are used as the major public space for residents right now.
(4) There are a large number of illegal buildings and constructions inside. They have poor quality, block up the street space and public space, and interfere with people's actions.

5.4 Design Guidelines
Based on the dynamic protection approach, the issues will be addressed in the design proposal. Therefore, the design guidelines of my design proposals are the following aspects:

(1) The design proposal should be based on the overall analysis of the study area.

(2) For ease of protecting the historical value in the block, the valuable historical buildings and normal residential building in this area should be well protected, instead of easily demolished.

(3) The public space should be added appropriately, to provide communication spaces in this area, in order to improve the public participation there.

(4) The regional bus transport connections should be improved, so that people can reach the train station easily.

(5) Some new functions and features are necessary to add inside, to improve the attractiveness and vitality of the neighborhood.

Overall, what I need to do in the design proposal is through the protection and renewal of the historic residential block in Xijindu historic district, to improve the vitality and living condition of this neighborhood, and also to make this area be able to adapt the requirements of the modern city. I will try to make this area become a livable, attractive and well protected historic residential block in the modern city.
Chapter 6 Design Proposal

As I summarized in Chapter 2 and Chapter 3, the main characteristics of historic residential block are community, historical significance, size and built density, distinguishable features and identity, continuity, strong vitality, and diversity. And the characteristic - community is very important, which makes the historic residential block different from the other historic blocks, therefore, the use value - provide comfort living area to residents, is the basic value of historic residential block. The other two values are historic value and cultural value, which are also very considerable features of it.

However, In the design proposal, I should not only consider about how to protect the historic residential block, but also should try to make the block livable. So, I will use dynamic protection approach to renovate the study area. The dynamic protection approach is a sustainable, organic and small-scaled renovation approach, and the goal of this approach is to trying to restore the vitality to the block, and make the block not only be well protected, but also could meet the
requirements of the modern city.

Therefore, the goal of this design proposal is to use the dynamic protection approach to protect and renovate the old residential block in Xijindu historic district, try to transform it into a livable, attractive and well protected historic residential block (Image 6-1, Image 6-2).

Image 6-2 Design proposal - model

Image 6-3 Location of Jiangsu province

Image 6-4 Location of Zhenjiang
The detailed design proposal will focus on a part of the historic residential block in Xijindu historic district, Zhenjiang, Jiangsu Province, China (Image 6-3, Image 6-4, Image 6-5). The study area that I choose is a typical historic residential block with about 3.28 hectares (Image 6-6). Meanwhile, it is seated along the road, contains different constructions, for example shops, museum, office, etc, and the surrounding situation is complex. (Image 6-7) Therefore, this area has strong research ability, and in the design proposal I could exploring about how to use dynamic protection approach to solve the problems in a complex historic residential block, and provide a reference for the renovation of the surrounding historic residential area.
I will pay main attention to the following aspects in the design process:

1. **Connection with train station:** To optimize the bus lines between the study area and the train station.

2. **Renovation of historical buildings in the block:** During the design process, the historical buildings need to be well protected and repaired, instead of arbitrarily removed. To seek the destruction of the historic buildings in the area to a minimum, maintain the historical characteristics of the whole block.

3. **The illegal buildings in the block:** According to different situations, such as bad quality, block up the space, etc, the illegal constructions in the block would be reconstructed or demolished. Others would be rebuilt, to fit the overall environment of the block.

4. **Spaces of the block:** Try to figure out the important space elements of the historic residential block, which should be well kept and used. And try to add more public space in the block, to increase the public participation, as well as make the street spaces clear and store the original street network.

5. **Connection with the surroundings:** Try to enhance the connection between the museum area and the study area, and re-planning the branch road there, make it comfortable and safety for pedestrians.

6. **Function of the block:** The design orientation of function in this block is to maintain the original living function as the main function, then add some new features inside. Such as the health care, library, and so on, to meet the daily needs of residents, as well as enhance the attractiveness of this block. This also could make this area meet the requirements of diversity.

Then, I will have a specific analysis about the design proposal of the historic residential block in Xijindu historic district in the following text.
6.1 Connection with train station

6.1.1 Bus system

According to the foregoing analysis, the bus connection between the study area and train station is very weak. There is lack of the bus that could not only go through this area, bus also could reach the train station directly. Based on the analysis of the road network around this area, and the running routes of bus 2, bus17 and bus 123, I found that in the west side, the bus 17 and bus 2 could connect with each other (Station A, and station B), and residents could changed from bus 2 to bus 17, then reach the train station. But the bus 2 and bus 123 could not connect with each other, so, I suggest the bus station of bus 123 could moved a little to connect the bus 2(Image 6-8), to make the residents could reach the train station area in the east side conveniently.
6.1.2 Bicycle system

In addition, the study area is very close to the railway station, therefore, the bicycle connection between them are also very important. In the survey, I found the branch roads haven't plan bicycle paths (Image 5-8), so, I suggest to re-plan the bicycle dedicated paths for cyclists, to provide a safety and smooth way for cyclists to reach train station (Image 6-9).

6.2 Renovation of historical buildings in the block

The historical building is an important part of the historic district, it's the main carrier of the historical characteristics of the historic district, it is also the most important place for living in the neighborhoods. On the survey, I found most of the historical buildings in the study area are very old, have poor construction quality, and lack of modern living facilities (Image 6-10). Therefore, the historical buildings in the block require not only protection, but also updating. In order to make them could meet the residents’ demand of modern and comfortable living condition.
Through the protection and repair of the historical buildings, we could create a comfortable environment and coordinating overall style of the entire historic residential block. According to the cultural value level of historical buildings in the block, all the buildings could divided into 3 categories: the outstanding historical buildings, the general historic buildings and the general buildings (Xiang, 2010). Each type of buildings could use different protection approaches.

(1) The outstanding historical buildings
Hackney thought the historical buildings could refer to the buildings that have historical, scientific and artistic value, and could reflect the historical characteristics of the city (Hackney, 1990). So, I think, the outstanding historical buildings could understand as the buildings that have high-level historical, scientific and artistic value, and could contain the historical characteristics of the district and city. They are very important part of the historic residential block, although they are not as valuable as cultural relics, but the layout and form of the outstanding historical buildings could constitute the basic style of the historic district, they are leaders (Xiang, 2010).

Protection and updating of these buildings should firstly protect, the protection approach refers to the static protection approach (described earlier in this chapter), but they still should not be kept as a simple relic. They should have a new function and be useful in the future (Liu, 2009). Specifically, the protection of outstanding historical buildings should not be strictly in accordance with the way of the heritage protection, the implement of protection approach should be, instead, in accordance to the actual situation. For instance, the historical buildings of Guang-zhao Hall (Image 6-11), they should be carefully maintained and repaired, the internal
function of buildings should be transformed suitably, to make it have useful function to meet the requirements of the modern city. For example, these buildings could treat as museum, gallery, restaurant or office after they have completely repaired.

![Image 6-11 Guang-zhao Hall](image)

(2) The general historical buildings

Based on the understanding of the historical buildings, the general historical buildings could refer to the lower cultural value buildings but could still blend into the overall environment of the historic residential block (Xiang, 2010). Normally, these buildings have no high cultural value, but are numerous, and a large number of them have long been neglected and fallen in disrepair. Mostly, these buildings are residential buildings, a very important part of historic residential block (Tang, 2003).

According to the destruction of the building itself, these buildings could be divided into the following 2 categories for processing:

(1) The building has good quality, there are no significant structural problems of it. A small amount of repair for the damaged part of the building would be enough (Image 6-12).
(2) The building has been seriously damaged, could not afford comfort living condition to the residents (Image 6-13). The treatment of these buildings, firstly, the internal structure should replaced by the new structural. Such as use steel instead of original wooden structure, the narrow internal space also could restructure into bigger and comfortable space. But the external roofs, walls and other architectural style, should not be changed as far as possible, and designers should try to use local traditional building materials to repair them, to fit the neighborhood’s historic features (Liu, 2009).
(3) The general buildings

The general building refers to the buildings in addition to all the historical buildings. These buildings built in recent years and the architecture styles are often not very coordinated with the traditional architectural style (Xiang, 2010). For example, some of them have large height, and some have different appearance (Image 6-14).

Image 6-14 Contrast these two buildings, the foregoing one was building recently, and has different appearance

Renovation of buildings could focus on the facade renovation, such as change the wall covering material to fit the overall style in the block, and the over height buildings could try to reduce the height, to make the skyline comfortable there. The illegal buildings that affect the public space in the block should be removed (Tang, 2003). These would have remarkable effect for the improvement of the overall scene of the historic residential block. However, I think, as an evidence of the developing process in the block, some of these buildings could be kept.
6.3 The illegal buildings in the block

The changes of the buildings will mainly happened on the illegal buildings in the block (Image 6-15). For example, some illegal buildings, which are occupied the public space and break the original street structure. In order to restore the public space and street structure, they mainly will be removed. However, some special illegal buildings, such as the illegal building which is built along the branch road, they will be rebuilt. The goal of the reconstruction is try to change the low quality and featureless illegal building to be the building that using the same material as historical buildings and containing the historical characteristics and elements. To make the whole block has a complete and consistent historical style.
The buildings in the block are low-rise buildings. In the survey results show that except for a few 1-floor buildings, the rest housings are 2-floor buildings in this block. There are 2 3-floor buildings in the block, they are parts of the Guang-zhou Hall in the north side. The opposite buildings in the museum area are mainly 3-floor buildings (Image6-16).

At the same time, compared this image and the image about "change of the buildings", it can be found that most of the illegal buildings in block are 1-floor buildings, and some 2-floor buildings. In the design proposal, the demolished illegal buildings are mainly 1-floor buildings, and for the 2-floor illegal buildings, still give priority to transform or rebuild.
Through the re-planning of this block, we can see from Image 6-17, the illegal buildings which were seated along the road have been rebuilt. And the others which did not hinder the public space and street space, have been kept and reconstructed also. Also, the original one-storey building seated along the street will be rebuilt into two-storey building (The detailed analysis will in 6.6: Function of the block.). Meanwhile, the reconstruction of illegal building has taken full account of the characteristic of the block - courtyard (The detailed analysis will in 6.4: Spaces in the block.). Furthermore, the Guang-zhao Hall historical buildings will be given new functions, and take full advantage of them.
After the re-planning of this block, the buildings in the study area are mainly two-storey buildings, and parts of three-storey buildings (Image 6-18).
6.4 Spaces in the block

From Image 6-19, we can see that the main open spaces in the historic residential block are the courtyard and entrance space of the houses, the streets and small public squares. Meanwhile, at the north of this area is a construction site right now, the buildings in this place have already been torn down in the survey. Therefore, currently, there is a non-functional area. In general, the courtyards are private spaces or semi-private spaces, therefore, the streets and small public squares become the major public space in the historic residential block.

However, there are only a few public squares in the study area, it is lack of public space. Therefore, in order to provide enough public spaces to the residents, there are two aspects I want to focus on: firstly, enhance the connection between the study area and the public space -museum area nearby (it will be mentioned in 6.5). Secondly, add some public spaces in the study area (it will be mentioned in 6.4.2).
6.4.1 Courtyard and entrance space

Anyway, the courtyard is a very important and common element in the historic residential block, I need to pay attention to the courtyard in the transformation of the buildings in the block.

The following Image 6-20 is about the analysis of several houses and courtyard types in the block.

![Diagram of courtyard and entrance space]

Image 6-20 Analysis of courtyard and entrance space

The courtyards in the block could mainly divided into two types: the outer court and the inner court. In general, the inner court is more intimate, it’s a private space. The location of the outer court is near the door, when neighbors stopping by to visit with each other are mainly in this space. Therefore, it’s a semi-private space.

In the block, either the building placed alone, or there are some buildings placed side-by-side. When some buildings placed side-by-side, the entrance space would developed in front of the buildings. Sometimes the entrance space belongs to a house, and sometimes two families will share an entrance space. The entrance space is connected to the street directly, not in the interior of the house. Therefore, it can be regarded as a semi-public space.
The courtyard elements and the form of housing arrangement in the block are the characteristics of traditional residential block there. They need to be well protected during the transformation process and the new buildings in the block should consistent with them.

6.4.2 Small public squares

At the time of the survey, I found that many elderly people spending their daytime in the street in front of their houses (Image 6-21). They said they usually do not want to go somewhere far away from home, and the street is the only suitable place for them to stay. Therefore, an appropriate increase of the small square among the residents' houses, could give them a better day-to-day rest space in the block.

At the same time, by analysis of the current situation in the block (Image 6-12), there are only a few small public squares in the block. Due to the serious problems of settling illegal houses by residents in the block, this kind of illegal constructions not only have bad quality, but also occupied a large area of public space. Therefore, in order to add public spaces in the block, some of these illegal constructions should removed, and recovery the small public squares.
According to the analysis of two examples in Image 6-22, we can see that by removing illegal buildings, which occupied public space, could expand the original small public square, make it has a bigger scale and create some new squares. The small public square does not need to be a large area, only a small scale could make it not only become a stay node in the neighborhood, but also small-scale activity space for surrounding residents of it. It has great effect to the surrounding residents, could increase the communication between neighbors.
The re-planning of the public spaces has greatly enriched the number and scale of the small public squares in the block, and provided public place to the residents for daily communication and activities (Image 6-23).

The transformation of Guangzhou-Zhaoqing Hall and its nearby area create a large area of public space for the whole neighborhoods and residents living nearby. And this place will have good connection with the museum across the road.

The changing of public space not only enrich people's daily activities, but also enhance the attractiveness of the block.
### 6.4.3 Street space

<table>
<thead>
<tr>
<th>Road Style</th>
<th>Width</th>
<th>Usage</th>
<th>Current Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch Road</td>
<td>Around 10m</td>
<td>Car/Bicycle/Pedestrian</td>
<td>![Branch Road Image]</td>
</tr>
<tr>
<td>Primary Alley</td>
<td>Around 2.5m</td>
<td>Bicycle/Pedestrian</td>
<td>![Primary Alley Image]</td>
</tr>
<tr>
<td>Secondary Alley</td>
<td>Around 1.8m</td>
<td>Bicycle/Pedestrian</td>
<td>![Secondary Alley Image]</td>
</tr>
<tr>
<td>Branch Alley</td>
<td>Around 1.2m</td>
<td>Bicycle/Pedestrian</td>
<td>![Branch Alley Image]</td>
</tr>
</tbody>
</table>
According to the survey, the periphery road of the blocks is a branch road, which opened to the cars also. The internal streets in the block are too narrow to open to cars. The internal streets are disorganized, they are not of uniform sizes, and have no uniform standards. According to the width of the street in the block, I divide the streets into three categories, namely: primary alley, secondary alley and branch alley. More details shown in the table 6-1

Based on the analysis of the street network in the block, I found that, although the streets seems to be disorganized, in the main, the organization of the streets is very simple. Firstly, several primary alleys connect different parts of the whole block, then next to the primary alleys, the secondary alleys lead people go inside of each part of the block, and finally use the branch alleys connect the families deep inside of each part (Image 6-24).

However, parts of the illegal constructions in neighborhoods were built in the street. It not only affects the clear of the street, but also destroys the original street structure of the block.
As shown above, the illegal house built in the street, which is only 2.5m wide, then the width of the street narrowed to be about 1m immediately. It causes inconvenience for people’s daily passage. Therefore, this type of illegal houses should be removed, to smooth the streets, and restore the original street structure in the block (Image 6-25).
Through the cleaning of the illegal buildings on the street, residents could come and go smoothly in the street. Meanwhile, the new street network after re-planning has restored the original pattern again. They have clearly major and minor relationship among the main street and secondary street, branch street (Image 6-26).

6.5 Connection with the surroundings

Under the investigation, I found there are three boundaries in this area (Image 6-27). One is the gap between the big Guang-zhao Hall and residents living in the surrounding houses, it forms an intangible boundary there. The second one is the fence around the construction site. Another one is the boundary between this block and the museum area. I will break these boundaries, to strengthen the linkages between the each part.

First of all, the intangible boundary between the Guang-zhao Hall and the surrounding residents housing will be broken by replacing the function of the hall, making it become a place for residents' daily activities. To change the hall became public activities space, instead of a rich man's private club (The detailed analysis will in 6.6: Function of the block.). Secondly, the fence around the construction site will be removed, and create a public activity
space for residents.
Finally, the boundary between this block and the museum, the road between them will be redesigned and make the road more pedestrian-friendly.

According to the situation of the investigation, this branch road only has two parts: sidewalk and driveway. In the absence of well planning, the driveway is very messy, cars parking at any place they want, seriously affect the smooth of the road. The bikes riding a random walk on the road, although the car speed is slow there, they are still in risk. Meanwhile, there has no zebra crossing on the road, the pedestrians general jaywalking across the road, it’s also dangerous (Image 6-28).

Therefore, I suggest to re-planning the road, reserve the sidewalk, and redistribute the bikeway, parking spaces and driveway (Image 6-29). Put the bikeways on both sides of the road and unify
the parking spaces to the side of the museum. It's not only easy to museum staffs parking, while also keeping the study area with more open space in front of the shops along the road.

![Image 6-30 Zebra crossing and parking area in Karlskrona, Sweden](image)

![Image 6-31 Zebra crossing in Karlskrona, Sweden](image)

Usually, there are not many cars driving on the road, in addition to local residents, are the museum staffs and tourists go through there. So, in order to reduce the speed of cars, some parking spaces form as obstacles that put along the road in a distance, to let the cars could only go through one by one, and then play the purpose of controlling the vehicle speed on the road. The zebra crossing could be free up in the parking position, and make people safe passage (Image 6-30 and Image 6-31).

By re-planning of the road, I want to form a pedestrian friendly situation, and enhance the connection between the study area and the museum area.
6.6 Function of the block

The residential buildings are the main buildings in this area, and they are located in the interior of the block. Some shops are arranged along the road on the opposite side of museum. The Guang-zhao Hall on the north used to be private residential and office buildings, but they are under construction, and have no function right now (Image 6-32).
6.6.1 Shops along the road

There are two building forms of the shops along the road, one is a single-storey building, the entire building is shop, or half shop and half residential use. Another one is double-storey building, the first storey is shop, and the upper is using for living. The shopkeepers of the single-storey buildings said it's very crowded inside of building when they also live inside. But, if there is no living function of building, they are not rich enough for renting another house. The people live in the double-storey buildings feel better (Image 6-33).

In order to give the residents a better living condition, I will transform the single-storey buildings along the street into the double-storey buildings, and the new buildings along the road will keep using this form.
From the point of view by investigation, I found many of these shops are stagnant and have gone out of business. On the one hand, it is because of the bad environment of these shops, they can't attract guests. On the other hand, it also because of the whole block is lack of vitality and attractiveness, and its weak connection with the surrounding area (Image 6-34, Image 6-35).

Therefore, in order to attract more people, I will try to improve the attractiveness of the whole neighborhood, as well as re-decorating and renovation of these shops, to create a better environment to attract people. These shops in addition to serving the local residents, mainly service for tourists who come to the museum area. So a good connection between this area and the Museum could also can promote the prosperity of the shop. I also want to encourage the shop owners use the shop for traditional handcrafts, special local product of Zhenjiang, traditional food, etc, to connect with the museum and the historic style of the block.

6.6.2 Guang-zhao Hall

Guang-zhao Hall is a large historical building group. In the design proposal, I will take fully advantages of it, to change it into a public service center in the neighborhood. I will add health care, kindergarten, convenience store, etc to facilitate the normal life of the residents. Increase Library, interest classes and others to provide a learning place for the elderly and children. To bring the club, cinema, gym, etc in, and provide a place of recreation for the residents' daily life. And the tea house and restaurants can also attract tourists around to come. The change could
increase the attractiveness of the region, and bring vitality back to the area (Image 6-36).

6.6.3 New function of the block

Based on all the analysis above, the master plan comes out (Image 6-37).

Under the premise of maintained residential function as main function in the block, I use dynamic protection approach to renovate the study area. I added a large number of small public squares, a large public activity space, as well as a lot of new features into this block. These new functions could help to attract others come here, and change this block from a dilapidated, lifeless and depression old historic residential block into a vibrant, livable and attractive one (Image 6-38). Basically completed the goal of design proposal.
The detailed information will show on the sections (Image 6-39, Image 6-40, Image 6-41).

**Section A-A**

Image 6-39 Section A-A

**Section B - B**

Image 6-40 Section B - B
6.7 Conclusion

In the design proposal, I use dynamic protection approach to renovate the historic residential block in Xijindu historic district, Zhenjiang, and the changes mainly happen on the following aspects: (Image 6-42)

(1) Redesigned the bus line, to make this area have better bus connection with the train station area, and to make the residents could easily reach the bus stations.

(2) The original historical buildings have been well protected in the study area, and no random demolition of them, to keep the historic scene of the whole area.

(3) Dealt with the illegal buildings in the block appropriately. I removed the illegal buildings which hinder the streets, or occupy the public space, to smooth the paths, restore the original street network and give more public space to the residents. The others have been rebuilt, to comply with the overall historical style of this area.
(4) Added small public spaces in the block, which could serve for the around household, which could provide them with comfortable places for communication and daily activities. And this could enhance the relationship between neighbors in the block.

(5) Made full use of the large vacancy area in the north of the block, which were closed to the Guang-zhao Hall. I changed this place to be a large public activity space, which could provide a place for meeting, exercise, communicate, etc, to the whole neighborhood.

(6) Redesigned the branch road between the study area and museum, to make the road more safety and comfortable for pedestrians and bicycles. Meanwhile, strengthen the connection between the study area and the museum.

(7) Redesigned the shops along the branch road. Some single-storey shop converted into a more favorable double-storey shops, which could provide bigger living space for the owners. At the same time, I renovated the shops, making them more attractive.

(8) Rearranged function of some buildings in the block. For example, I took full advantage of the historical buildings of Guang-zhao Hall, adding some useful public facilities into them, such as the health care, library and others. Not only made these historical buildings be fully utilized, but also strengthened the convenience of people's daily life in the neighborhood.

In conclusion, after the re-planning of the study area, the historical characteristics would be well protected inside, and this historic residential block would contain livable living condition, convenient public service facilities, ample public spaces, perfect entertainment places for leisure time, and also have closer connection with the surrounding area. All of these changes make the study area in Xijindu historic district Zhenjiang become a livable, attractive and well protected historic residential block.
Chapter 7: Summary and Conclusions

– Reflecting upon the application of the Dynamic protection approach to Historic residential blocks

7.1 Summary

In this thesis, the main research question was: How can the Dynamic Protection approach be used for the renewal of the historic residential block and make the old living areas become full of vitality?

In order to answer my research question, in the chapter 2, I did an analysis about the historic residential block, to figure out what aspects should be considered during the renovation process proposed by a design proposal. The historic residential block mainly refers to the block in which the buildings have mainly the residential function in the past, and even today they retain the residential function as its main function.

The historic residential block is a part of historic district, therefore, the analysis started from the concept of historic district. As I summarized, the "historic district" is an area of a certain scale, that formed and developed gradually in a long-term historical process, contains a certain number and size of real historical relics, and could reflect a particular historical period of the city and social life style. The historical significance, size and built density, distinguishable features and identity, continuity, strong vitality, and diversity are the main characteristics of the historic district.

Furthermore, the historic residential block not only has the same characteristics as historic district, but also contains an additional but important characteristic: "Community" that makes the historic residential block different from the historic commercial block and the historic cultural block. It means, in this block should contain a certain number of families living inside, and they have their own life style, which performed at their activities in public or semi-public space of the block. Due to the characteristics of historic residential block, the use value is the basic value of historic residential block, which is to provide living area to residents. Together with the historic value and cultural value, also very important features of the historic residential block, these should be carefully considered during the renovation process. Therefore, the renovation of a historic residential block should consider the conservation and utilization of historical buildings, protection and re-shaping of public space, updating the basic living facilities
and function, and other detail aspects.

In the Chapter 3, based on the introduction of the evolution about the protection rules of historic district and the critical analysis of the large-scale renovation approach and the static protection approach, which are the most common approaches to urban renewal in China, I proposed the dynamic protection approach as a more appropriate renovation approach for historic residential block.

The large-scale renovation approach is applied in a large-scale area, and using a new form or function to replace the original things which is declining. In China, this approach is used very often, not only because it is rapid and effective, but also, it can meet the requirements of China's government, to highlight the achievements of the modern development of the city. However, there are some differences between the features of large-scale renovation approach and key points of protection of historic residential. For example, the large-scale renovation not only waste of resources, but also often create similar styles, and too simplistic to miss the protection of the original cultural characteristics, historical atmosphere and social life in the historical residential block.

The static protection approach mainly uses strict controlling measures to protect the inherent and original historical style of monomer historic buildings, groups of buildings, or famous historical gardens. This approach is suitable for the protection of precious historical relics, historical landscape or garden or valuable historic buildings. But the historic residential block doesn't only consist by the valuable historical buildings, there are lots of low value historical buildings will be ignored and maybe destroyed during the static protection process. Furthermore, the historic residential block is not only historic remains, but also a complete and vibrant community. Sometimes, the static protection approach doesn't treat the historic district as a whole, and ignores the relationship with the development of the historic district and the whole modern city.

Therefore, the large-scale renovation approach and the static protection approach are not suitable for the renovation of historic residential block. But, the dynamic protection is not limited to the protection of tangible heritages in the historic residential block. The intangible cultural heritages, such as the history, culture, life styles are also included. Additionally the dynamic protection approach emphasizes the sustainable, organic and small-scaled renovation of historic residential block.

By means of the dynamic protection approach, the designers should firstly analyze the historic-current-and future situations together of the whole historic residential block, and also
should give sufficient consideration to the residents' public participation and the protection of its diverse characteristics in the block. However, the protection process should be flexible rather than unalterable, so designers could find problems in time during the transforming process, and timely adjust them. Then, by renovation of historical buildings, rearrange of public space and regulation of environment in the historic residential block, the dynamic protection approach is trying to restore the vitality to the block, and make the block not only be well protected, but also could meet the requirements of the modern city.

Through the analysis of the characteristics of historic residential block and research on the dynamic protection approach above, I consider that the protection and renovation of historic residential block by dynamic protection approach should focus on 4 points. These are the dynamic protection of historic buildings (either the appearance, or the function of the buildings should be considered), the public space in the block which could impact the residents' daily activities, the infrastructures in the block, and the historic culture that reflects in details. The case study and design proposal of the historic residential block in Xijindu historic district later focused on these aspects as well.

Finally, in order to explore the application of the dynamic protection in practice, I decided to use the case study as my research methods for discussion. Then, for the sake of exploring the application of dynamic protection approach in a Chinese historic residential block, I took the design of the historic residential block in Xijindu historic district, Zhenjiang as an application case.

The study area is part of Xijindu historic district, which is located in northeast of Runzhou District, Zhenjiang, China. The Xijindu historic district used to be the city center in the past, and a majority of the buildings in this neighborhood are still inhabited. There are many registered historic preservation buildings in the district, the building form, street structure, etc still maintain the traditional style. But, this area has lots of problems, such as bad living condition, a large number of illegal buildings, lack of public space, poor public transport connection to the train station, etc.

Although there is not prosperous anymore, it still has great development potential. The study area is very close to the train station, city center, famous parks, etc. A lot of bus lines go through this area, the residents could reach most parts of the city conveniently. The museum is very close to the area, and the study area is surrounded by green spaces, those make this area has good surrounding environment. Furthermore, it's a traffic safety neighborhood, because it's far away from the main road, and no cars could go inside of the block.
Therefore, it's appropriate to maintain the living function in this historic residential block, rather than simply tear it down and rebuilt a modern community there. The design proposal focused on using dynamic protection approach to protect and renovate the historic residential block in Xijindu historic district, and transform it into a livable, attractive and well protected historic residential block.

The design proposal was based on the protection of original historical buildings and historic characteristics of the study area. By the treatment of illegal buildings in this area, I created more small public spaces within the blocks, kept the streets clear and restored the original street structure of the block. Additionally, I added some useful public facilities in the area, and re-planed some bus lines to provide a better living environment for residents. I re-planed the shops along the branch road and the branch road itself, to enhance the attractiveness of the study area and the connection with the surroundings. I did all these things and tried to make this area become a livable and attractive historic residential block. This case also shows that the dynamic protection approach is feasible in practice.

7.2 Conclusion

7.2.1 Limitations

In this paper, I find there are some disadvantages that I didn't take into account. For example, on the using dynamic protection approach to protect the historical buildings in the historic residential block, due to lack of architectural knowledge and transportation planning, the idea I proposed might not be perfect, and probably have some aspects that I did not give full consideration. Such as the specific contents of building renovation, the re-planning of the bus line, the suggestion of change the branch road, etc. Also because of limited knowledge, I haven't given a specific suggestion about the optimization and improvement of infrastructure in the historic residential block, which I identified earlier on as a problem of the neighborhood and influencing the living conditions of the inhabitants. Furthermore, I surveyed the study area before I went abroad, so there might be some omissions of the investigation because there were aspects that I should have observed better but that, at the time, I didn´t know they would be relevant for the current thesis. Finally, because of time limitations, my design proposal is superficial and it could benefit from some improvement later.

7.2.2 Contributions

Currently, the historic residential blocks are not only facing a big challenge from the quick urbanization and economic growth in the modern city, but also having lots of problems
themselves. Many historic residential blocks in the city are very old and facing the congestion and aging problems. For example, the buildings and infrastructures in the historic residential block are very old, and have serious aging problems. A large numbers of illegal buildings damage the street structure and block up the public space in the block. Some historic residential blocks are no longer occupied a key position in the city, they are not prosperous anymore. They have lack of attractiveness and are short of vitality, and gradually derailed from the modern city. Therefore, the historic residential blocks are unable to satisfy residents' increasing demand for good living condition and comfortable surrounding environment.

However, I argue here that by dynamic protection approach, the attractiveness and vitality could be brought into the historic residential block again. The goal of dynamic protection approach is to make the historic block restore the vigor and vitality, to achieve sustainable development and rehabilitation of the historic residential block. The protection and updates of the historic residential block are considered together by the dynamic protection approach. Meanwhile, the key points of using dynamic protection approach on the renovation of historic residential blocks is that, this approach not only concerned about the protection of historical characteristics in the block, but also focuses on how to stimulate the development potential of the block itself, make the block restore the vitality, and re-adapt to the development of modern city.

In this paper, based on the analysis of the historic residential block and the dynamic protection approach, I found the dynamic protection approach could replace the most common urban renewal approaches - the large-scale renovation approach and the static protection approach, to be the effective method in the renovation of historic residential block. It's conductive to improve the livability and attractiveness in the well protected historic residential block.

At the same time, by applying the dynamic protection approach on the design of the historic residential block in Xijindu historic district, I found that the dynamic protection approach has strong operational value in practice. I hope this paper can provide some reference to other renovation projects of historic residential block in China.

7.2.3 Suggestions

(1) Enhancing the residents' protection awareness of historic residential block
Currently, due to the poor living conditions of the historic residential block, most of the residents want to change. And in the survey, I found that their protection awareness of the block is not strong, many residents did not care whether the block will be protected or not, even some hope the region can be rebuilt into a modern community. However, the residents in the neighborhood are important, therefore, the publicity and education about the value and
protection of historic residential block are necessary. In order to improve the residents’ protection awareness of the historic residential block.

(2) The government should provide adequate subsidies or incentives for the renovation of historic residential block
In the historic residential block, mostly of the buildings are private houses, and some residents are not rich. Therefore, I suggest that the government and residents could share the renovation funds together. For example, the government should be responsible for the renovation of the public spaces in the block, and the government could undertake part of the costs about the renovation of private houses. This could bring impetus for the renovation of historic residential block, and relieve the residents' financial burden.

(3) The government should have appropriate intervention policy for the future development of the well-protected historic residential block
Firstly, after the renovation of the historic residential block, the better environment and strong historical atmosphere would attract large numbers of tourists. The design positioning of the area is a historic residential block, the main function is living, the surrounding facilities are residential service-oriented functional facilities-based. Therefore, I suggest that the governments need to develop some regulations for this area: The tourists and visitors are welcome to this area, but, in order to protect the original characteristics of the historic residential block, the block should still keep the living function as main function. The large-scaled commercial developing projects or tourism projects are not allowed in this area.

Secondly, after the renovation of the block, better living environment will attract rich buyers, such as wealthy families to come and live there. The original residents are freely choose to stay or sell their own houses. However, in order to maintain the well-protected historic residential block, I suggest that the government should have regulations that any inhabitants who residing in the block, should take the responsibility of protecting the block, especially they should protect their own historic buildings. The internal environment are allowed to be changed on the residents' own terms, but prohibited the random changes about the appearance of historical buildings.

Finally, in addition to private dwellings, the government should assume the protection and management of the public spaces and surrounding environments. To make the well-protected historic residential block could be well maintained in the future.

(4) The establishment of community-based organizations to protect historic residential block
In the future, the well-protected historic residential block will encounter many problems.
Therefore, I think, it is necessary to mobilize people's enthusiasm and participation to establish a neighborhood conservation organization, which contains the inhabitants, professionals, government members, etc, to discuss and solve the follow-up issues together.

Therefore, I hope, that through these publicity and education, government regulations and policies, could effectively protect the historic residential block.
Reference


Standing Committee of the National People’s Congress, China. (2002) *Law of the People’s


Image resource

Image 1-1: http://ha.ccdy.cn/xinwen/kuanxun/201212/t20121224_507662.htm
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