

Urban Protection and Renewal Based on Context Heritage --Renewal design of Yantai old town

Qiming Liu^a, Liwei Yang*

Tiangong University, Tian Jin, China

Abstract. With the acceleration of urbanization and the improvement of people's pursuit of spiritual home construction, the standards required for the protection and renewal of historical and cultural sites are rising, and not only the tourist attractions and commercial blocks in ancient historical and cultural sites need to be protected, repaired and infused with the vitality and charm of the new era. The external natural landscape belt connecting the ancient city wall and supporting leisure facilities also need to complement the scenery in the city.

The research background of this paper is Yantai City of Shandong Province tourist attractions as an example, the use of field research and literature research, to analyze the history of the city, using the method of local conditions to match planting, using the charm of ancient poetry to create scenery, to show the outside world the charm of Yantai, to show the world "to show the world the ancient city called Suocheng, it covers half of the history of Yantai. Standing at the root of the ancient city wall to enjoy the scenery, as if to appreciate the charm of all kinds of beautiful historical city in the world" The charm of the historic old town.

1 Introduction

1.1 Background and purpose of the subject

Historic ancient city area is not only an ancient city, a landscape, but also the root of a city, the soul of a city and the witness of the continuation of a city's history. As a site of human civilization left by countless dynasties and wars, it is a human cultural heritage with fireworks and time precipitation.

Compared with the inner residential areas and modern commercial blocks in the ancient city, the atmosphere of the outer city wall and the landscape belt of the outer city wall are also extremely important. They not only serve as the "buffer zone" for the collision between the ancient and the modern, but also serve as the leisure sector for tourists and local residents.

Were published [2]. However, with the rapid growth of economy and the continuous advancement of modernization in urban areas, people pay more and more attention to the development of spiritual world, but there is a lack of supporting places for spiritual world entertainment. Moreover, the acceleration of urbanization has led to the destruction of many ancient buildings, or the reconstruction and protection of ancient buildings in formalism has led to the serious damage of the original ancient buildings.

Based on the actual case of Yantai City, Shandong Province, this design adopts modern means and materials, and on the basis of preserving and protecting the original

architectural features to the greatest extent, to designs the architectural space and landscape belt of the southeast area of Suocheng, so as to achieve the charm of "old bottled new wine". Continue the historical context, so that the city will be reborn, and when designing the southeast regional landscape belt of the city, the charm of ancient poetry will be integrated into the landscape design. Combined with planting and matching, the tourists in the city will experience "to show the world the ancient city called Suocheng, it covers half of the history of Yantai. Standing at the root of the ancient city wall to enjoy the scenery, as if to appreciate the charm of all kinds of beautiful historical city in the world "

1.2 The main content of the subject

With the rapid development of economy and society, the continuous improvement of people's requirements for material and spiritual life further promotes the improvement of design requirements. After the renovation and design of the whole inner city of Suochengli, to some extent, there is a disconnect between Suochengli and the modern city outside, and the lack of connection and transition. Therefore, it is urgent to design the supporting facilities of the urban landscape belt area and public space area outside the city, and a transition space that can connect with the existing urban space is needed. The peripheral urban landscape design of the city can not only echo the ancient buildings of the city, but also improve the overall tourism style of the historical and cultural blocks

^a474684340@qq.com

*1262950324@qq.com

of the city, so that a tourist city has more than one name card for external publicity, At the same time, it can enhance the cultural heritage and popularity of the city, broaden the prospects of the city development, and clarify the orientation of the city brand.

1.3 The significance of the topic

Were published [1]. Suocheng is not only a banner of Yantai tourism industry, but also carries the heritage of Chinese culture and the wisdom of ancient people. It is an old city with real fireworks atmosphere. Today, when people are more and more pursuing material and spiritual world, cultural tourism is extremely popular. Therefore, the focus of this project is to extract the corresponding local cultural elements, local architectural styles and traditional Chinese symbols to creative design a historic city wall and its landscape design based on cultural heritage, protection and renewal.

1.4 Research status at home and abroad

1.4.1 Foreign research status

Were published [3]. Nowadays, the protection of historical and cultural sites needs to be designed based on the accumulation and evolution of local context, which refers to "a cultural context" in the linguistic category; Cohen defined "context" as "the system of living style created in history"; Postmodern urban planner Schumacher put forward the theory of contextualism in *Contextualism, Ideal and Disintegration of City*, that is, context is the internal relationship between people and architecture, architecture and city, and city and its cultural background. Context is the historical witness and cultural crystallization of cultural development, and the direct embodiment of a nation's culture and emotional memory.

The understanding of context protection can be traced back to ancient Greece, and the foreign awareness of context protection was first concentrated in the field of architecture. In the 1960s, postmodernism criticized modernist architecture and urban planning for their lack of inheritance and development of context, and tried to reconstruct urban culture and apply historical context to architectural creation, so as to better protect, develop and utilize the context. With the development of context protectionism, context protection, development and utilization have gone deep into the process of urban planning, and a complete legal system of context protection has been formed.

China began to pay attention to the protection of context after 1980s. Relatively speaking, the protection, development and utilization of context in foreign countries are relatively mature, and there are many advanced practices worth learning. We should learn from the advanced practices of protection, development and utilization of foreign contexts, and further improve the level of protection, development and utilization of Chinese contexts.

1.4.2 Domestic research status

Were published [10]. China has extremely profound intangible cultural heritage and heritage of cultural relics, which are also a kind of high-quality tourism resources. The development of cultural relics and historic sites sightseeing tourism is not only beneficial to the protection and inheritance of cultural context, but also can produce huge economic benefits and realize the reuse and value maximization of cultural context. Compared with foreign countries' emphasis on the reuse of cultural relics and historic sites, many cultural relics and historic sites in China have been abandoned in the historical process and cannot be fully developed and utilized. China should fully explore the social and economic value of historical context, vigorously develop the tourism of cultural relics and historic sites, and at the same time pay more attention to the authenticity of historical context in the process of development and protection, so that people can approach, understand and inherit historical context, and realize the protection, development and reuse of historical context to the greatest extent.

Nowadays, with the rapid economic development, the state and society have paid more and more attention to the development and protection of cultural sites. For the state, context is the witness of historical development and the crystallization of the wisdom of countless working people. As far as the local area is concerned, the protection, development and utilization of cultural sites can well promote the development of the local tertiary industry. On the one hand, it promotes the economic growth, on the other hand, it promotes the development of culture. In the new era, the protection and development of context has become a hot topic.

2 Investigation and Analysis of Space Design Projects of Two City Walls in Yantai

2.1 background check

Suochengli, located in Zhifu District, Yantai City, Shandong Province, has a history of cultural heritage for hundreds of years and is one of the cultural relics protection units of People's Republic of China (PRC) in Shandong Province. On December 7, 2006, it was awarded to the Shandong Provincial Cultural Relics Protection Unit, which is an ancient architectural complex in the Ming Dynasty. The city covers an area of about 98,600 square meters, with a total area of 79,600 square meters. There are four gates in the city, named Baode Gate in the east, Xuanhua Gate in the west, Fulu Gate in the south and Chaochong Gate in the north. The inner side of the city wall is paved with a circular horse road, which can go straight to the city to fight. There is a cross-shaped street in the city, which leads directly to the gates on all sides, and also serves as a special passage for military affairs. This is the earliest street in old Yantai, and now it has been changed into the main street in Zhifu District. In the northwest of the city (now Shiyan Street), there are yamen and houses for officials and their families. A training

ground is set up in the northeast of the city (formerly Gaojia Hutong and Fujia Hutong); In the southwest of the city, which is now Cangyu Street, there are barracks kitchens and grain warehouses; The Wei Institute was built in the same period, because there was a wolf smoke pier and platform in the north gate (now Yantai Mountain), so it was known as Yantai among the people.

2.2 Investigation and analysis of current situation

The locate is the only closed city in Yantai, which has witnessed almost all the footprints of Yantai's development in modern times. Now it is located in the south of the east section of South Street, the most prosperous street in Yantai, and it is one of the very important signs of old Yantai.



Fig. 1. Satellite comparison map of the city from 2010 to 2016
【From the network】

For Yantai people, the city is a kind of spiritual sustenance, a leisure place with the flavor of human fireworks, and it has gathered the cultural atmosphere since the Ming Dynasty and continued to this day. Under the great environment that the state now attaches importance to the development and utilization of ancient cultural sites, this ancient city area in the city has begun to make a second success and regain its vitality in the new socialist era, and various constructions are in full swing. Nowadays, the design of the architectural space of the ancient city wall and the corresponding supporting green landscape belt are being carried out simultaneously.

2.3 Survey and analysis of surrounding people

The city is close to Hou an community in the east, with a huge population of residents, and the city is close to Yantai Wanda Plaza in the west, with a very high passenger flow.

Yantai, as a tourist city with beautiful coastal scenery, has a permanent population of 7,102,100 by 2020. In the same period, the population of the district and county where the ancient city is located is more than 877,000, and the registered population is nearly 710,000. On the premise of not being affected by the epidemic, the annual tourist flow is huge. Therefore, in the center of the city with a huge flow of people, it is necessary to have the corresponding functional areas as the basis, so as to improve the tourist carrying capacity of the city as much as possible, and then support a large number of tourists.

2.4 Analysis of the surrounding environment

The city is adjacent to South Street in the north, Nanmen Street in the south, Beihe Road in the east, Shengli Road in the west, 2 kilometers north to the seaside and yantai hill, and 2.5 kilometers south to Tashan. It is adjacent to many historical buildings, and has the same axis with the modern buildings of Yantai Mountain and Chaoyang Street Historic District.



Fig. 2. Environmental analysis map of the surrounding area in the city and enlarged map of regional details 【Creation comes from oneself】

3 Design process of city wall space design project in Suocheng

3.1 Design orientation of city wall building space and landscape belt

The design of a building space and landscape belt based on local context heritage is closely related to the development of the city. Based on the local field survey and analysis, it is concluded that this design is an old cultural city in Yantai, a small part of the whole Zhifu District, and a scenic spot with context heritage. The main purpose of this design is based on cultural heritage. This design adheres to the principle of cultural heritage. It is necessary to adhere to the "historical inheritance, differences between the old and the new, overall inheritance and future development" of context inheritance to design.

Were published [4]. Historical inheritance indicates that we need to respect the local cultural connotation, local customs, natural evolution, cultural ecology and corresponding historical allusions to make corresponding design schemes; The difference between the old and the new means that in the process of design, the changes before and after the design should be reflected, instead of blindly bringing forth the new, it must not be a single complete reserved inheritance, and there needs to be differences before and after; On one hand, the overall inheritance tells us that this design should proceed from the overall situation and look at this design project from a comprehensive level. Then the development of the final future is also essential. Were published [5]. A good design scheme needs to verify its classicality with the passage of time, and whether it is a qualified design work with the passage of time.

3.2 Source of design idea

This design is to maintain and reconstruct the original material. Maintenance means inheritance and protection, while reconstruction means deconstructing and reorganizing the original material. Compared with the form, cultural heritage will pay more attention to spiritual heritage, which requires designers to deconstruct and reorganize it on the basis of understanding its spirit, and at the same time extract the best elements for design, and understand the existing spatial organization order in the city to create a people-oriented public space design. Deconstruction is not to break before standing, but to design on the basis of maximum protection. From the plan view of the geographical location of the whole area, this design is an L-shaped landscape design located in the southeast of Suocheng Street. The idea mainly comes from the roof of ancient buildings in China. Through structural analysis, this design uses wood materials and mortise and tenon structures as an important landscape element for redesign, which integrates functions, beauty and practicality. In addition, the roof element is the core soul of the design. Create a strange scene of "online celebrity Punch-in" roof lawn, and extract the wall elements and roof elements in the key design areas to create a unique landscape space of "Suocheng", aiming at increasing tourists' sightseeing experience and opening up new places for local residents' cultural leisure.

3.3 Analysis of design projects in three cities

3.3.1 Dynamic line analysis

The whole moving line of the public landscape design in the southeast corner of the city is divided by green belts, which naturally forms artificial leisure passages in a shunting state. The peripheral part has a pedestrian walkway with a width of 2,500 mm to 3,500 mm. The key green areas set up passages and landscape nodes in a semi-symmetrical form around the central axis, and the natural green vegetation is used to create the spatial feeling of "there is no way to return to doubt when mountains are heavy and rivers are heavy, and there is another village in the dark". In the periphery, the visual effects of near-big and far-small are used to create the visual experience of "it's very narrow at first, you can just pass one person, and then take dozens of steps, and your vision will be suddenly enlightened".

In addition, landscape belts and landscape nodes are used to isolate pedestrian passages into several roads. In today's post-epidemic era, it is necessary to reasonably control the distance between people, to achieve crowd diversion, and to ensure the experience of tourism.



Fig. 3. Dynamic road node analysis 【Creation comes from oneself】

3.3.2 Planting collocation

The city is located in a coastal city, which is more affected by temperate monsoon climate. The water vapor in the coastal area is humid, the water vapor is transported more, and the temperature difference near the sea is small. The plants suitable for planting in Yantai mainly include Fatong, which grows in Yantai with few pests and diseases. Meanwhile, ginkgo, locust, clove, flowering shrubs and other varieties are also suitable. Platanus, Chinese parasol, boxwood and rose can purify the air, reduce noise and green the streets. Bushes and lawns are complementary, forming a multi-layer vertical greening community structure of trees, shrubs, vines and flowers. Relying on the design elements of the ancient city wall with stones, the enclosing design of the landscape area around the city wall is carried out, and the vertical green belt is matched, so that the building can be unified with the surrounding environment by means of planting, which makes the building look like it has accumulated in history and time. The main trees should be planted according to local conditions, and the appropriate planting collocation should be adopted to create the scenery.

On the basis of planting plants suitable for local water and soil climate in Yantai, according to the characteristics of planting and appearance, the most suitable plants for planting in the greening area of Yantai city are selected as follows: the upper layer is tall trees with high sunshine, the middle is semi-sunny plants such as flowering shrubs, *Chimonanthus praecox*, *Phyllostachys praecox* and *Xifu Begonia*, and the bottom layer is planted with shade-tolerant ground cover plants such as *Zoysia japonica* and *Ophiopogon japonicus*, forming a landscape belt with distinct levels and outstanding community characteristics, which is a typical landscape plant community collocation.

Relying on the design of the wall root of the ancient city wall with multiple vertical green landscape belts, it can not only achieve the effect of sound insulation and dustproof, but also naturally divide the pedestrian walkways and landscape belt areas. The southeast corner of the city adopts a green isolation belt in the form of

height difference, which makes it a public landscape area with a distance from the road.



Fig. 4. Plant load analysis diagram 【Creation comes from oneself】

3.3.3 Landscape design

According to different visual effects, different landscape nodes are designed for tourists to appreciate in the design of public landscape areas in the city and the architectural space of city walls. The main landscape nodes set up by the central axis are the main ones for greening public landscape areas. On the west side of the central axis of the design area, the sculpture of "The general stood on his horse with his broadsword sideways" is the landscape node; The east side is the original cultural landscape wall; There is a place in the middle for tourists to rest and punch in, which extracts the traditional roof symbols of China, and then builds a roof form landscape; As well as the semi-sunken tourist cultural space which extracts the elements of city wall fortifications and roof modeling elements; At the end of the space is a roof structure element made of mortise and tenon structure, which integrates functions and aesthetics. At the same time, the high and low levels of planting are used to create the scenery described in ancient poems. Greatly increased the interest and appreciation of the tour.



Fig. 5. The left side is the left view of the central axis, and the right side is the right view of the central axis 【Creation comes from oneself】

3.3.4 Regional material design

(1) The whole ground public area is paved with "Ershun Erding bricks", and some green areas are paved with embedded grass bricks as auxiliary materials for landscape. The edge area is 200mm dark rough bricks, which are made of the same material as the root of the city wall.

(2) The root of the city wall is made of dark rough bricks, and the middle and upper parts are made of uniform dark gray retro bricks.

(3) Some rest areas are mainly made of yellow wood, and the roof element landscape sketch is made of roof tiles and concrete masonry on the side.

3.3.5 Landscape sketch element design

(1) The seats in the public landscape area are made of structural elements of imitation wood-wrapped stones, and the exterior is wrapped with wood materials to cover the interior stone (stone materials are extracted from the wall material elements), and the front of the seats is extracted from the wall fortifications elements; The top of the left side of the landscape street lamp is the extraction of roof elements, and the right side is the A dragon in the clouds element which echoes the space of the city wall. The white strip and lanterns are used as lighting systems to provide night sightseeing lighting; The top of the trash can adopt roof elements similar to those on the left side of the street lamp, the lower part extracts the city wall fortification structure, and the pinstripe road serves as the guiding effect of the light environment at night, forming flowing lines and patterns.



Fig. 6. Combination style drawing of seat and trash can 【Creation comes from oneself】



Fig. 7. Actual renderings of dragon style street lamps 【Creation comes from oneself】

(2) A semi-sunken tourist cultural space, which is made from the elements of city wall fortifications and roof modeling in the middle of the key landscape area.

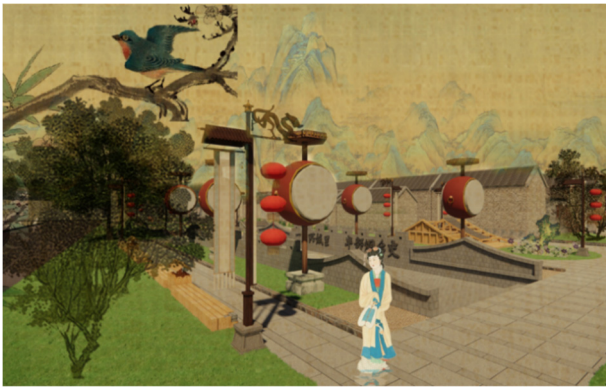


Fig. 8. Semi-sinking style tour of cultural space 【Creation comes from oneself】

(3) The top of the space part of the city wall is provided with an ancient building with a roof like a single eaves hanging over a mountain, a pedestrian passage is set around the building, and the crenels, city walls and hanging eyes imitating ancient war fortifications are set at the passage.

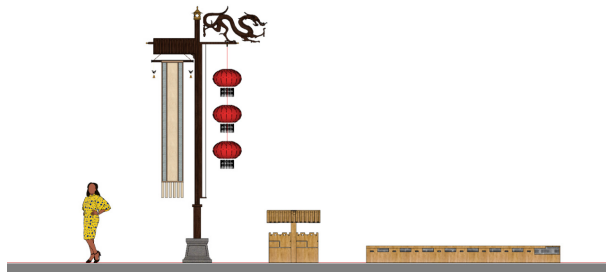


Fig. 9. Centralized display diagram of some public facilities systems 【Creation comes from oneself】

3.3.6 City wall architectural space design

Were published [7]. In the long history of urban development, with the loss of the military defense function of city walls, many places are gradually demolishing city walls. Mr. Liang Sicheng, a famous architect, once said, "Tearing down a tower is like digging up a piece of my meat, Stripped the city bricks of the outer city like a layer of my skin " In the new era, people gradually discover the importance of historical heritage. An ancient city site is the root and soul of the local city and the best witness to protect the memory of the city.

The research on the protection of China city walls is speeding up. As early as the 1950s, Liang Sicheng first put forward the protection and utilization strategy of city walls. He strongly supported the protection of ancient buildings and city walls, protected historical and cultural heritage, highlighted the style of ancient capital, and pointed out that the modernization of city walls could greatly satisfy people's lives and become a valuable environment for the growth of generations of human beings.

Were published [6]. Influenced by historical and geographical factors, most of the ancient city walls in Yantai were built in the Ming Dynasty and repaired and reinforced in the Qing Dynasty. More than 600 years ago, in the early Ming Dynasty, Ming Taizu issued an imperial edict and several cities were built in Jiaodong

Peninsula. Until 1655 AD, in the 12th year of Shunzhi in Qing Dynasty, another imperial edict turned "Qishan Institute" into "Qishan Society" in Qing Dynasty. With the passage of time, the breath of life slowly filled the old city of Yantai.

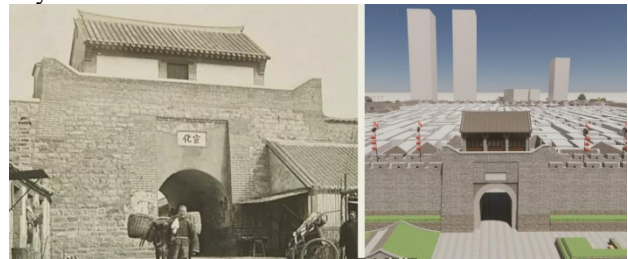


Fig. 10. Reference design of the city wall 【The picture on the left is from the Internet The creation of the picture on the right comes from myself】

Ancient buildings with single eaves and overhanging roofs

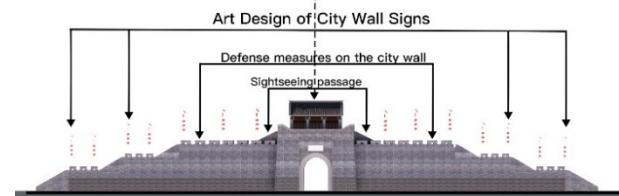


Fig. 11. Analysis diagram of architectural space design of city wall 【Creation comes from oneself】

This design area is located at Baode Gate in the east. Due to historical factors, Baode Gate has not been restored by too many historical evidences. Based on the scale of the former site, the original Baode Gate was repaired with antique bricks to the greatest extent, so as to be as old as possible, which is in sharp contrast with Xuanhua Gate with modern steel bar structure renovated in the west of this ancient city. It straddles an east-west main street in the city, and the feeling that the two walls echo each other from ancient times to modern times is vividly felt.



Fig. 12. Final effect 【Creation comes from oneself】

4 Conclusion

Nowadays, with the development of economy and the prosperity of culture, people's requirements for spiritual homes are also rising, not only staying at the stage of "just reaching the standard", But to rise to "Excellent is just qualified standard". The renewal of the cultural landscape

should not only stay at the superficial formalism design, but also thoroughly study and understand the development and evolution of local historical context and the living habits of local residents. On the basis of mastering the important conditions such as the data of local tourist population, it is possible to make a popular public space design that conforms to the current aesthetic mainstream. The design is designed for people and serves them, so the design needs to consider whether it is really urgently needed by the masses. If you want to make a design based on context, you must understand the context to make a good design, and this design needs to be tested by time and years to verify the classic practicality of the design.

References

1. Cuicui Hou. (2017). Development and Utilization of Xi 'an City Wall Landscape in Urban Space Planning and Design. *Beauty and Times (City Edition)* (10),51-52.
2. Guanlin Luo. (2021). Research on Teaching Reform of Integrating Environmental Design Specialty into Rural Revitalization. *Real Estate World* (24),51-54.
3. Huamin Zhang & Qin Zhang. (2022). Exploration of advanced practices of foreign cultural context protection, development and utilization. *Appreciation of famous works* (03),53-55.
4. Jing Zhang. (2006). Recreational function transformation and cultural heritage of the old port area of the city -- Taking Shiliupu area of Shanghai as an example. *Tourism Journal* (01),25-30.
5. Sun Jun Qiao. (2010). Towards new contextualism [D]. Chongqing University.
6. Meiling Wu & Zhuoxi Li. (2022). The city, looking back 600 years. *Going to the world* (04),42-47.
7. Peilin Zhao. (2021). Study on Landscape Design of Public Space of Nanjing City Wall Greenway (Master's Thesis, Nanjing Forestry University).<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1021865013.nh>.
8. Yang Yupei.(202201.339). Landscape plants [M]. Chongqing University Press.
9. Xing Qinghua.(201104.503) Design Aesthetics [M]. Nanjing Southeast University Press.
10. Yanjun Gong & Lixin Wang. (2020). Enlightenment of public participation in foreign cultural heritage protection to China. *Sichuan Building Materials* (02),44-45.