# Research on Spatial Transformation and Reusing Strategy of Historic Urban Landscape under Cultural Tourism Guidance

## Take Harbin Old Port Area as an Example

**Huan Zhang, Zhiqing Zhao**
Harbin Institute of Technology

**Abstract**

Under the background of urban development characteristic changes from incremental construction to stock renewal, many resource-based cities in northeast China have faced such problems as spatial degradation, cultural fracture, and idle heritage. Therefore, this study takes the Harbin old port area as an example. The utilization mode of cultural tourism is determined through the port's historical development analysis and heritage value evaluation. Based on this, the spatial transformation and resilient planning of the old port area can be completed, while the vitality of heritage and development of the city can be stimulated. The research mainly includes three stages. First of all, it analyses the development characteristics of the Shipping Culture by dividing four historic layering stages, so the relevant historic urban landscape elements are extracted and divided into types. Then, the evaluation system of heritage value and reuse potential is established, and the value grade and remodel degree of landscape elements are determined. Finally, according to the current characteristics of elements at each level, different corresponding development modes are matched. Based on the supply of tourism products, the port is also activated through the reconstruction of the tourism system. Then realize the balanced development goals of heritage protection and utilization and urban space transformation.

**Keywords**
Historic Urban Landscape, transformation of urban heritage space, the evaluation systems of heritage resource value and reuse potential, cultural tourism, Harbin old port area.

DOI: 10.7480/iphs.2022.1.6687

# INTRODUCTION

Northeast China has long been a famous heavy industry base taking advantage of coals and other natural resources. But after the urban development entered the era of "stock" and the construction mode of cities changed from "quantity expansion" to "quality improvement", these cities were generally faced with problems of resource exhaustion, industrial decline, and urban space degradation. Therefore, the new functional types implanted in the historical area, the balance between historic urban landscape protection and development are critical issues under the severe test of spatial transformation. The Harbin old port area is one of the typical representatives of urban industrial culture. However, the port area, a kind of waterfront port industrial base, is gradually declining and even abandoned with the acceleration of Harbin's urban development speed in recent years, the gradual decline of the manufacturing industry, the formation of a complete operation system of tourism, and the continuous upgrading of transportation technology. Although the shipping function has been unable to meet the needs of the city, the old port area has left many historic urban landscape resources in different historical periods of the function evolution. These resources provide an opportunity for the spatial transformation of the old port area in the new era. There are three points to find out suitable methods. The first one is clearing the landscape characteristics and potential driving factors behind the formation of the landscape. The second one is finding out the development opportunities of the landscape in the old port area through the value evaluation and elements classification. The last one is clarifying the specific measures of cultural tourism reusing strategy.

# 1. THE HISTORIC FUNCTION EVOLUTION OF THE HARBIN OLD PORT AREA

## 1.1 THE FREE GROWTH AND RESTRICTED PERIOD ALONG THE SONGHUA RIVER (BEFORE 1898)

Harbin is located in the lower plain of the Songhua River, with flat terrain and numerous river. It has the inherent advantages of water transportation. The close relationship between the shipping function and the city can be seen from its name. One is that the word Harbin was originally Manchurian, with the meaning of drying nets and fishing bubbles. It seems very similar to the claim that Harbin was originally a small fishing village by the Songhua river [1] (Figure 1). Some scholars believe that Harbin comes from a big flat island with a pointed shape at both ends. The river flows evenly on both sides of the island. In the map of the Qing Dynasty, the position of the flat island is completely consistent with the current position of Harbin[2]. The final theory is that Harbin is a transliteration of the Jurchen word for "alechinese", representing glory and honor, as evidenced by the small island named "alechinese" along the Songhua River now[3]. At this time, although Harbin occupied the natural advantage of shipping function, the Qing Government's Prohibition Policy restricted the development of the national shipping industry. Since the Qing government entered the north Chinese plain, it regarded the

three north-eastern provinces as “the place where the dragon originated”. In order to ensure the stability of the feudal dynasty’s rear and protect the cultural customs from the influence of the Han Culture, it implemented the Prohibition Policy on the three north-eastern provinces and some parts of the Inner Mongolia area for more than 200 years [4]. Under the combined action of policy pressure and severe cold climate in northeast China, Harbin gradually showed the phenomenon of sparse population and slow development speed of all kinds of industries, which eventually led to the political and economic level of northeast cities in China seriously lagging behind those of inland plain areas. It was not until the outbreak of the Second Opium War that the Qing government had to lift restrictions on the cities in northeast China to strengthen its control over the territory. Therefore, Harbin had chances to develop. At the same time, the shipping industry also sprouted.

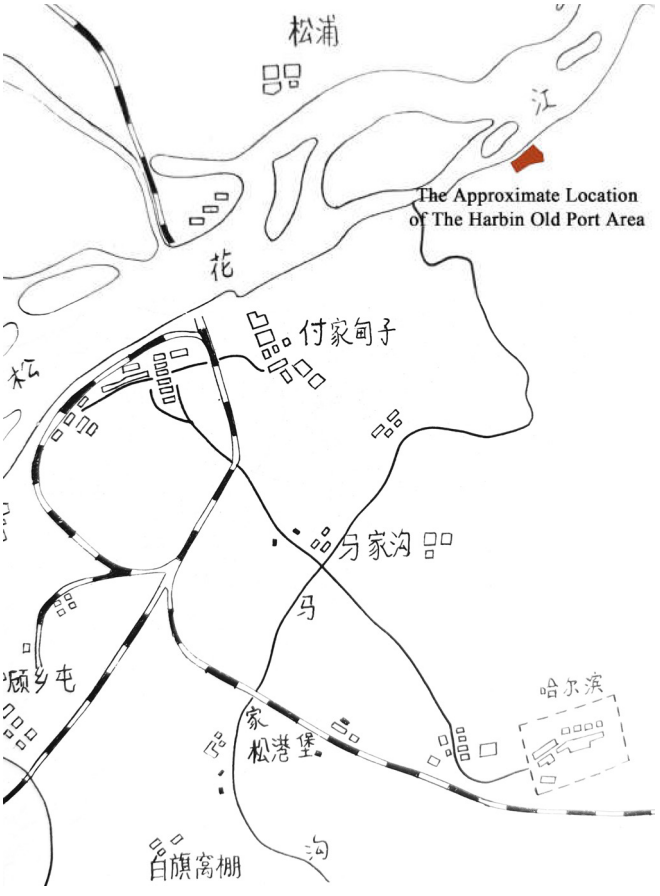


Fig. 1. The spatial development of Harbin in 1898. The old port area is basically unconstructed in the free growth and restricted period.


Fig. 2. The Complete Map of Harbin Municipality in 1938. Railways had been extended to the old port area at this period.

## 1.2 THE MILITARY MATERIALS TRANSFER PERIOD AFTER THE COMPLETION OF THE CHINESE EASTERN RAILWAY (1898-1945)

The construction of the Chinese Eastern Railway and the outbreak of the Russo-Japanese War quickly promoted the transformation of Harbin from a small fishing village along the Songhua River to an international city in the far east area. Railways became the core element of towns' development in this period [5] (Figure 2). At this time, the shipping industry of Harbin also got preliminary development. A large number of buildings and facilities represented by Harbin Port and Fujiadian Wharf were formed in this period [6]. The ships, routes, cargo volume, and cargo types involved in the shipping industry have all increased to different degrees [7].

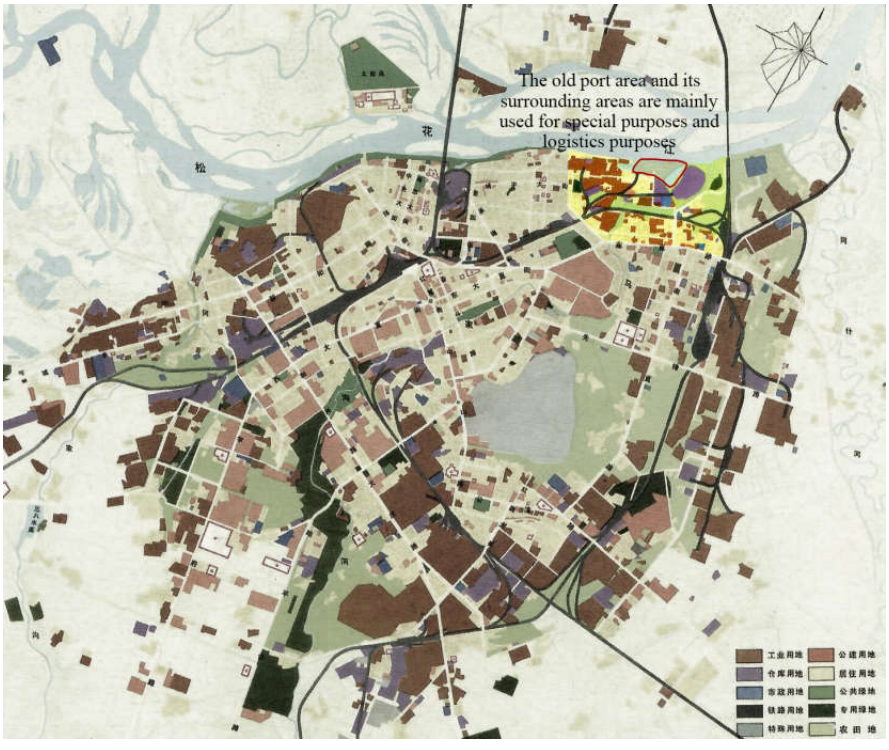


Fig. 3. The Existing Condition Map of Harbin Municipality in 1980. The old port area and its surrounding areas are mainly used for special purposes and logistics purposes.

The early docks in Harbin are located along the Songhua River in Daowai District. In 1896, China and Russia signed the "Secret Agreement Between China and Russia", and the Russian government concluded that Harbin was "the intersection of the Songhua River and the Chinese Eastern Railway, just at the juncture of land and water", so Harbin was confirmed as a railway and shipping hub and the Russia government started building docks. In 1898, the ship dock was set up near the Yacht Club (the Railway River club now) and the River Bridge (the Western River Bridge now). During the Russo-Japanese War of 1904-1905, Tsk-Russia laid railway lines near the eighth district port (Binzhou Railway Line Bridge to the first street in Daowai district), to meet the needs of wartime transportation monopoly and material plunder. Through this method, the connection between railway and shipping transport is realized, which greatly improves the passing capacity of the port. After the establishment of the Republic of China, due to the channel changes and the loss of dredging in the docklands, the Wutong Shipping Company moved the dock to the Daowai District area.

This period is the representative shipping function development stage of the old port area. The historic urban landscape in the site, such as railway lines, docks, cranes, and warehouses, were all formed in this period, which is the concrete reflection of shipping culture. Therefore, the development of the shipping industry in Harbin not only has the significance of social-economic but also is the true reflection of modern national culture.

## 1.3 THE BOOMING PERIOD OF MODERN INTERNATIONAL LOGISTICS TRADE (1945 TO THE END OF THE 20 TH CENTURY)

After the victory of the War of Resistance Against Japanese Aggression in 1945, the government of the People's Republic of China took over part of the docks and engaged in loading and unloading of timber, grain, and other goods. Approved by the Nation Transportation Department in March 1955, Harbin port was formally established and put under the administration of Heilongjiang province in 1959. Therefore, the old port area has become one of the eight largest inland ports and the largest inland hub port in northeast China (Figure 3). The old port area has 12 thousand-ton berths and 5 special railway lines, with a cargo throughput of 3.5 million tons in 1990. The handling business covers timber, coal, grain, mineral, fertilizer, salt, and other fields. At this time, Harbin's water transportation routes throughout the Songhua River, Heilongjiang River, Ussuri River, and Nen River. In addition, the old port was connected with some ports in the far east area. Through the connection of sea transportation and river transportation, ships could depart from the Tatar strait to Japan, North Korea, South Korea, and Southeast Asia area. Harbin is also an important railway and air transportation hub in northeast China, and the old port area has entered a period of vigorous development of modern international logistics trade due to its gradually mature highway system.

## 1.4 THE DECLINE PERIOD UNDER THE TRANSFORMATION OF TRANSPORTATION SYSTEM (AFTER THE END OF THE 20TH CENTURY)

In recent years, Harbin keeps expanding and the infrastructure construction is also increasingly improved. The highway, railway, and air transportation network shows a great advantage, while the water transportation based on the ports shows low competitiveness. Similar to other waterfront cities, Harbin's old port area has encountered a difficult problem of transformation in the process of rapid urban development. At this period, port transportation is no longer the key to the city's economic development, and the old port area gradually loses its shipping function

and goes into decline. Especially after entering the 21st century, the new round of "Harbin urban master plan" adjusted the land nature of the old port area from logistics storage land to a mixed land dominated by residential, public green land, and commercial land. It is a symbol that the old port area is under the transformation from production land to living land. However, the inadaptability of space and function brings many difficulties to the transformation of the old port area. First of all, the dilapidated buildings, desolate environment, and rare human beings are greatly different from the surrounding modern urban landscape. Secondly, the abandoned factory building, dilapidated warehouse and other legacy buildings, backward service facilities, and dirty living environment have brought inconvenience and safety hazards to the residents living in the surrounding areas. The historic urban landscape such as harbor, dock, railway, and the crane has been annihilated in the decaying site, which is in urgent need of revival. Therefore, it is very important to clarify the historical value and available value of the historic urban landscape in the old port area.


Fig. 4. The spatial layout of the historic urban landscape in the old port area. The existing landscape originates from the shipping culture, mainly formed in the military materials transfer period and the booming period of modern international logistics trade.

## 2 THE VALUE EVALUATION OF HISTORIC URBAN LANDSCAPE IN THE OLD PORT AREA

### 2.1 CLASSIFICATION OF THE EXISTING LANDSCAPE ELEMENTS

The existing historic urban landscape types in the old port area are diverse, which can be roughly divided into architectural and non-architectural types. The architectural landscapes include port authority, warehouses and factories, staff dormitories, and steel storage sheds. The non-architectural landscapes include railway tracks, port cranes, chimneys, containers, the Songhua River, the harbor, and ancient elm trees (Figure 4).

The port authority was built in 1952 is a core representative of the shipping culture and it is currently used as an office building. The red brick warehouses and factories are divided into two sizes, which are placed side by side in groups. The sloping and arched roofs of the buildings enhance the industrial atmosphere of the old port area. There are three railway tracks inside the site, which extend from the southwest to the northeast side of the site in parallel.

| Building Function Category | Architectural Characteristics | Building Stories |
|---|---|---|
| **Harbor Authority** | The building is a two-story structure with three stories protruding from the center. With the five-pointed star ornamented on the wall of the building, there is an iron anchor with the words "1952" under it. The building gives the observer an impression of solemnity. | 2 |
| **Warehouse and Factories** | The roof forms of the buildings are divided into sloping roof and vaulted roof. The buildings have uniform volume, the orderly arrangement, the large space span. Many groups of buildings are placed side by side. The exterior wall adopts brick structure and the interior is steel frame, forming a typical industrial atmosphere. | 1 |
| **Staff Dormitory** | The building has large volume without too much decoration and the outer wall adopts red brick structure. | 6 |
| **Steel Structure Storage Shed** | The structure adopts steel structure framework inside, and the top layer is shielded by steel plate. The internal space is large and directly connected to the external environment. | 1 |

Table 1.1 Architectural Landscape Elements

| Cultural Landscape Category | Cultural Landscape Characteristics |
|---|---|
| **Railway Tracks** | There are three railway lines left inside the site, and both sides of the concrete sleepers can still be clearly observed. |
| **Port Cranes** | There are 3 harbor cranes left in the site, which are well preserved and large in size. They are typical landscape representatives of shipping culture. |
| **Chimneys** | Located on the southwest of the site. Using red brick structure and the appearance is preserved intact. |
| **Containers** | There are 10 containers distributed on the north side of the site, which are well preserved but have no specific functions. |
| **the Songhua River** | Directly connected to the site, there is a small dock along the bank of the Songhua River. |
| **Harbour** | The small lake, which used to be a harbor for berthing ships, is directly connected with the Songhua River. It has been closed into an inner lake. |
| **Ancient Elm Trees** | A large number of trees are planted on the east side of the site as walkway trees, and there is also an older elm tree in the site. |

Table 1.2 Non-Architectural Landscape Elements

Table 1. Summary of the Historic Urban Landscape in The Old Port Area

| Main class | Sub class | Code | Type | Landscape Elements |
|---|---|---|---|---|
| Waterfront Landscape | River | BAA | Sightseeing and Recreation River | The Songhua River |
| Biological Landscape | Tree | CAB | Bused Tree | A Row of Willows |
| | | CAC | Single Tree | Single Ancient Elm Tree |
| Site and Relic | Site and Relic of Socio-Economic Cultural Activities | EBA | Site of Historic Event | Harbour Authority |
| | | EBE | Traffic Sites | Railway Track |
| Buildings and Facilities | Comprehensive Cultural Tourism | FAF | Construction Projects Sites | Warehouse, Factory Buildings, Chimney, Harbour Crane, Dormitories, Container, Steel Structure Storage Shed |
| | Landscape Architecture and Ancillary Architecture | FCI | Public Open Space | An Open Space for Recreation |
| | Transportation Building | FFC | Port Ferries and Docks | Harbour and Small Dock along The Songhua River |
| Human Activities | Personnel Record | HAB | Events | Shipping History And Culture |
| | Modern Festivals | HDC | Festivals | Folk History And Culture |

Table 2. Classification of the Historic Urban Landscape Elements

| Types of Landscape Elements | Landscape Elements | Evaluation Scores | Evaluation Grades |
|---|---|---|---|
| Waterfront Landscape | The Songhua River | 88 | Grade IV |
| Biological Landscape | A Row of Willows | 34 | GradeI |
| | Single Ancient Elm Tree | 51 | GradeII |
| Site and Relic | Harbor Authority | 77 | Grade IV |
| | Railway Track | 61 | Grade III |
| | Warehouse | 40 | GradeI |
| | Factory Buildings | 62 | Grade III |
| | Chimney | 46 | GradeII |
| | Harbour Crane | 64 | Grade III |
| | Worker' Dormitories | 53 | GradeII |
| | Container | 19 | None Grade |
| | Steel Structure Storage Shed | 11 | None Grade |
| Buildings and Facilities | An Open Space for Recreation | 4 | None Grade |
| | Harbour | 63 | Grade III |
| | Small Dock along The Songhua River | 47 | GradeII |
| Human Activities | Shipping History And Culture | 62 | Grade III |
| | Folk History And Culture | 49 | GradeII |

Table 3 Evaluation Scores and Grades of the Landscape Elements

They connect the warehouse with factory buildings, as well as connect railway transportation with water transportation. However, the track has been damaged by corrosion due to years of unused, and only the concrete sleepers can be observed on both sides. The port cranes are the best tools for loading, unloading, and transporting goods during the modern international logistics trade period. The harbor was originally a body of water for berthing ships, directly connected to the Songhua River. After the port lost its shipping function, it has been changed to an inner lake (Table 1). On the whole, the historic urban landscape in the old port area has a huge diversity of types and a high degree of correlation with shipping culture. However, at present, part of the landscape only retains the external structure and loses the original internal function. Therefore, given the complexity of availability degree and the otherness of historic value of landscape elements, this study carries out a value evaluation of the landscape to determine the appropriate utilization mode.

## 2.2 VALUE EVALUATION OF THE LANDSCAPE ELEMENTS

A value evaluation system of "Elements classification -- Current situation investigation -- Expert assessment -- Rating and grading" was established in this study. The status and influence of landscape were recognized through on-site research and interviews with residents. At the same time, combined with the opinions of experts in urban planning and landscape, the final resource evaluation result is obtained. It provides a judgment basis for the determination of spatial transformation mode. Firstly, we divided the landscape elements into 5 main categories and 8 sub-categories. These landscape elements not only contain all the architectural and non-architectural landscapes in the site, but also include public open space, shipping culture, and folk culture. The object of value evaluation is expanded and the content of the evaluation system is enriched by adjusting (Table 2). Then the evaluation items are divided into two categories: the value and the influence of landscape elements, which respectively account for 85 and 15 points in the percentage system. The score of the value is determined by five aspects: recreational use-value, historic and cultural value, scientific and artistic value, rare and peculiar degree, scale and abundance, integrity. The influence value of landscape is judged by the situation of popularity, influence, and suitable travel period. Besides, the total landscape elements were divided into 6 grades from 0 to 5. It provides the basis for the choice of the following landscape utilization mode.


Fig. 5. The site plan of the old port area after the spatial transformation and reusing from the perspective of the cultural tourism.

Through the value evaluation of the landscape elements, five levels of landscape elements were identified. The fourth level elements are the Songhua River and the port authority. The third level elements are railway tracks, factory buildings, harbor cranes, shipping culture. The secondary ones are ancient elm trees, chimneys, workers' dormitories, small wharves along the Songhua River, and the folk culture. The first-level ones are the row of willow and warehouses on the east side of the inner lake. No grade resources are containers and steel structure storage sheds (Table 3). The grade of landscape elements not only reflects the different values but the availability degree. Both of the above provide a basis for the picking of the spatial transformation strategy.

## 3. SPATIAL TRANSFORMATION STRATEGY OF THE OLD PORT AREA

### 3.1 THE APPLICATION OF CULTURAL TOURISM DEVELOPMENT MODE

It has been more than 30 years since China's reform and opening up. During this period, the tourism industry has undergone five important transformations, from the single administrative reception function to the multi-functional superposition of leisure and entertainment, from the appreciation of physical landscape to the experience of cultural connotation. Tourism has become an important form for the transformation and reusing of the historic urban landscape. Cultural tourism takes sightseeing, participation, and other behaviors as the media to enrich visitors' experience by understanding and being familiar with the cultural characteristics of specific regions. Tourism products, as the core content of cultural tourism, take the representative culture as the mainline and combine it with other landscape elements to reuse the historic space. In the process of spatial transformation, the old port area

has established a system dominated by cultural sightseeing, experience, and exhibition tourism products, supplemented by cultural creative tourism products (Figure 5). Meanwhile, forming a corresponding tourism product cluster site. Cultural sightseeing tourism products take ecological advantage of the Songhua River, the harbor, and willows to form a natural scenery viewing system. Cultural experience tourism products add participation and experience functions based on sightseeing. Through the reuse of port cranes, railway tracks, warehouses, and steel structure storage sheds, we adopt different functions into the old port area, such as the small characteristic business, flavor snack street, dock cultural activities hall, and so on. Cultural exhibition tourism products describe and display shipping culture through reusing the slope roof workshop and masonry chimney. Adding new functions like the museum, exhibition hall, cultural corridor, scene stage performance into the site. The cultural creative tourism products transform the staff dormitories and containers into creative industry centers so that to spread the shipping and folk culture.

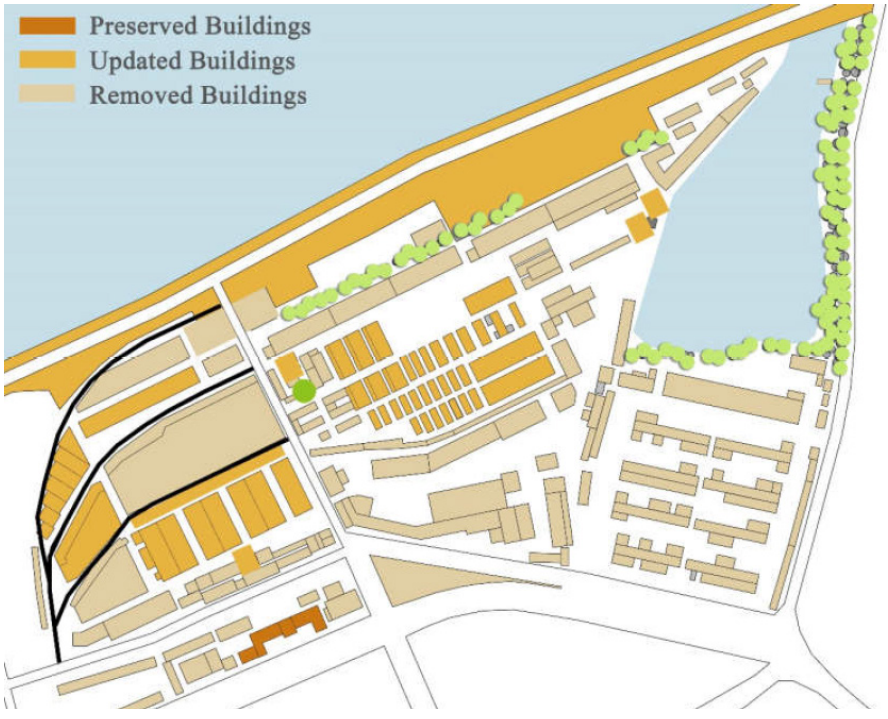


Fig. 6. Classification of landscape elements' reuse types. Based on the value evaluation results, three different grades of the landscape elements in the old port area are determined. Accordingly, there are three landscape reuse types are determined, including restoration inheritance, partial promotion, and overall renewal.

## 3.2 LANDSCAPE REUSE TYPES BASED ON VALUE EVALUATION RESULTS

According to value evaluation results, the historic urban landscapes in the old port area are reused by three types: restoration inheritance, partial promotion, and overall renewal (Figure 6). The Grade III landscapes have

significant cultural influence and higher quality. They are important reused objects in the port. Therefore, the reuse type we pick is restoration inheritance. The relevant landscapes include the Songhua River and the port authority. The Grade III landscapes include railway tracks, factories, port cranes, harbor, and the Grade III landscapes include the ancient elm, chimneys, dormitories, small dock along the Songhua River. They also have a large culture representative though the conditions of these landscapes are not very ideal. Although have a relatively complete appearance, they have lost their original function. So we adopt the reuse type of partial promotion. The other landscapes are of average quality and have weak cultural representation. Therefore, it is necessary to consider the functional needs of the whole port and adopt the overall renewal type.

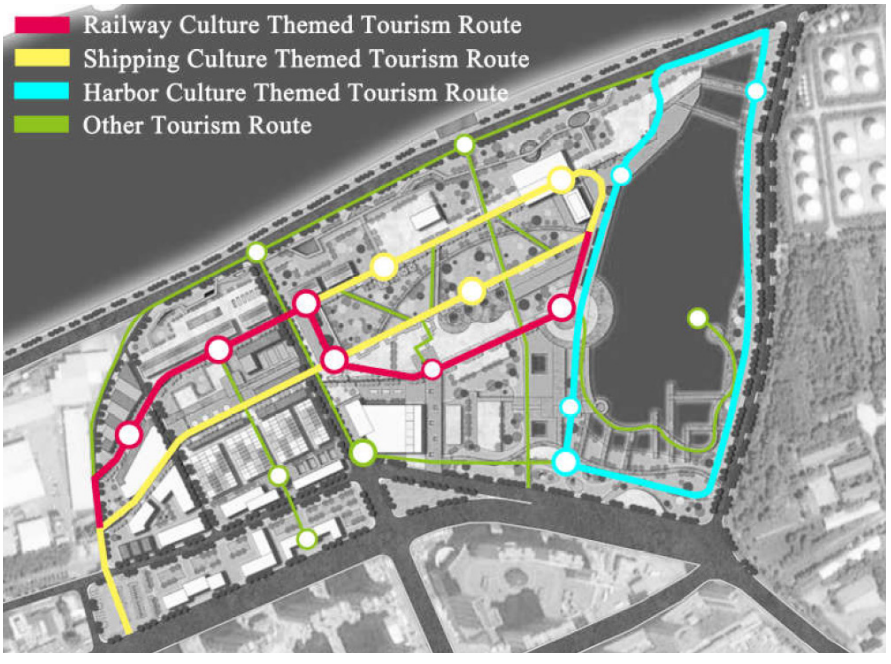


Fig. 7. There are three culture themed tourism routes in the site. And there are many large and small landscape nodes distributed in each tourism route.

## 3.3 THE DETERMINATION OF THREE CULTURE-THEMED TOURISM ROUTES

The study determines three tourism routes based on railway culture, shipping culture, and harbor culture themes. In this way, the natural and working scenes before the old port area was abandoned can be fully displayed in a limited site, so that tourists can understand the evolution process of regional culture while traveling (Figure 7).

The railway culture-themed tourism route provides leisure and entertainment functions such as shopping and catering under the reuse of railway tracks. Through constructions of railway characteristic commercial street and locomotive square, this tourism route has shown the cooperation scene between the railway transportation and the shipping transportation. The shipping culture-themed tourism route is parallel to the railway route. This tour line takes the small dock along the Songhua River as the core scenic spot and introduces the function of sightseeing by boat. So that the old port area becomes an important point in the landscape chain along the Songhua River while increasing the pleasure of sightseeing. This measure will help promote the importance of tourism resources along the Songhua River and enhance the influence of the old port area in the region. The harbor culture-themed tourism route is based on the inner lake and forms a relatively independent space taking advantage of the waterfront location characteristics. Visitors can experience waterfront display platforms, waterfront tribes, small berthing areas, port crane cultural experience areas, and sports parks along this route.

## CONCLUSION

In this paper, the spatial transformation and reusing of the old port area are studied from two aspects of external environmental factors and internal value connotation. As an important node along the Songhua River, the old port area is not an isolated historic urban landscape. It is an important part of the landscape chain along the Songhua River. The port's function evolution corresponds with Harbin's development stage, which is the solid foundation for the introduction of the cultural tourism concept to the old port area. In addition, based on the evaluation results of current landscape elements, the spatial transformation strategy is proposed, and the revival of the old port area under the new urban development background is realized through the introduction of cultural tourism mode and the reconstruction of tourism routes.

### ACKNOWLEDGEMENTS

I would like to express my deep gratitude to everyone who always helped me, especially to my professor and schoolmates who discusses and works together with me. They helped me a lot in my study and always gave me confidence to continue my research. In addition, this study was supported by the National Natural Science Foundation of China numbered 51878205. The project name is "Study on the Characteristic Townscape Planning Paradigm within the Zone of Chinese Eastern Railway based on the Approaches of UAV Remote Sensing and AI Deep Learning".

### DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author.

### NOTES ON CONTRIBUTORS

**Huan Zhang** is a doctoral candidate. Her research covers the fields about Planning and Practice of Cultural Heritage Protection; Theory and Method of Urban Planning. Her affiliation is School of Architecture, Harbin Institute of Technology; Key Laboratory of Cold Region Urban and Rural Human Settlement Environment Science and Technology, Ministry of Industry and Information Technology.

**Zhiqing Zhao** (the corresponding author) is a professor. His research covers the fields about Planning and Practice of Cultural Heritage Protection; Theory and Method of Urban Planning. His affiliation is School of Architecture, Harbin Institute of Technology; Key Laboratory of Cold Region Urban and Rural Human Settlement Environment Science and Technology, Ministry of Industry and Information Technology.

### ENDNOTES

1. Sanren Zuo, Yiqing Zhang, Lian Yang. Binjiang Chenxiaolu[M]. 2012.
2. Longbin Gao. The map and the place name of Harbin in Qing dynasty. [J]. Regional cultural studies. 2020(01): 139-146.
3. Chengdong Liu. Harbin in the culture of place names (I). [J]. Heilongjiang history. 2019(03): 38-48.
4. Yunyan Jia. The evolution of the ban policy in qing dynasty and its influence on the border defense in northeast China. [J]. Lantai World. 2015(24): 14-15.
5. Bocheng Zhang, Zhiqing Zhao, Peilun Li, etc. Research on early town planning under space syntax -- a case study of Chinese Eastern railway second-class station town. [J]. Urban Studies. 2018, 25(10): 128-133.
6. Lu Zhang, Zhiqing Zhao. Study on the characteristics of typical units of Middle East railway architec-

tural complex in Harbin city of heilongjiang province under type differentiation. [J]. Urbanism and Architecture. 2018(32): 13-20.

7. Guang Wang. China shipping industry. [M]. Beijing: The Commercial Press. 1929.

## BIBLIOGRAPHY

Bocheng Zhang, Zhiqing Zhao, Peilun Li, etc. Research on early town planning under space syntax -- a case study of Chinese Eastern railway second-class station town. [J]. Urban Studies. 2018, 25(10): 128-133.

Chengdong Liu. Harbin in the culture of place names (I). [J]. Heilongjiang history. 2019(03): 38-48. Guang Wang. China shipping industry. [M]. Beijing: The Commercial Press. 1929.

Longbin Gao. The map and the place name of Harbin in Qing dynasty. [J]. Regional cultural studies. 2020(01): 139-146.

Lu Zhang, Zhiqing Zhao. Study on the characteristics of typical units of Middle East railway architectural complex in Harbin city of heilongjiang province under type differentiation. [J]. Urbanism and Architecture. 2018(32): 13- 20.

Sanren Zuo, Yiqing Zhang, Lian Yang. Binjiang Chenxiaolu [M]. 2012.

Yunyan Jia. The evolution of the ban policy in qing dynasty and its influence on the border defense in northeast China. [J]. Lantai World. 2015(24): 14-15.

## IMAGE SOURCES

Fig. 1 the literature named 《哈尔滨寻根》, the ISBN number is 9787805579214.

Fig. 2-3 the literature named 《Glance Back the Old City's Charm of Harbin 》, the ISBN number is 9787112078165.

The rest of the tables and figures are made by the author.