

Research on the Reuse of Wharf Heritage from the Perspective of Cultural Fusion: A Case Study of the Abandoned Lai Chi Van Shipyard in Coloane, Macao

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Abstracts: Cultural fusion refers to the process of multiple cultures and features fusing into a new culture. It emphasizes the mutual infiltration among different cultures. Macao, as a city formed by immigrants from different countries, ethnicities and regions, has a quite complicated and diverse culture. As people are getting more concerned about the protective reuse of industrial heritage, the protection of heritage sites and the tourism development based on them has become the top priorities for Macao if the city wants to develop its cultural and tourism industries.

In this paper, research was conducted on the protective reuse of an industrial heritage site, Lai Chi Van Shipyard in Coloane, Macao. Guided by culture and tourism development, the adaptive reuse of wharf heritage not only requires us to update the “hardware”, but also to reproduce and create the former scenes. The goal is to create a unique and ecological waterfront life mode with wharf heritage. At the same time, the city language with Macao’s characteristic has to be put into use. Taking full advantage of the actual functions of scenes and spaces recreating, we are bound to bring out the city’s characteristics and vitality.

1 INTRODUCTION

Wharfs are important transportation hubs for Macao. Areas around the wharfs are bestowed with abundant natural resources and supreme geographical locations. Towns located along rivers can transport their cargo through boats. Therefore, towns and cities tend to develop around wharfs. A city’s culture also has its root in wharfs. The wharf landscape plays an important role in exhibiting the characteristic landscape of the city. (Ge 2015) Nowadays Macao has no shipbuilding industry. So how to protect and renew the heritage culture carried by Lai Chi Van Shipyard has become a top priority. With research methods like literature review and interviews, and taking Lai Chi Van Shipyard as an example, the author of this paper explores new ways of existence for today’s old shipyards, with an aim to develop cultural tourism and form new economic drivers. The new ways to develop and reuse wharf heritage in the post-industrial era is also under discussion.

2 HISTORICAL BACKGROUND OF LAI CHI VUN SHIPYARD IN COLOANE, MACAO

2.1 Historical Background of the City Macao

As a harbor city with a history of over 400 years, Macao has always been closely related to the sea. Macao’s culture integrates the education, customs and ethnics from both the east and the west. It is an inheritor of both the Han culture from the east, and the Portuguese culture from the west. Besides, Macao has also been influenced by various ethnic cultures, ranging from Spain, Netherlands, and England in the west, to Japan, the Philippines, Malaysia, and Vietnam from the east. (Hou 2019) If we trace back to the 1950s, we will find that most children who were born and raised in Macao, knew they were likely to become fishermen and shipbuilders when they grew up. At that time, fishing and shipbuilding are still at their prime time. In this small town lives nearly 10,000 fishermen and sits more than 30 large shipyards. Coastal villages at that time were full of

hustle and bustle, for the sea has abundant fishing resources, especially fish, crabs and oysters. (bbc.com 2015)

2.2 Historical Background of Lai Chi Van Shipyard

Lai Chi Van Village is located in the southwest of Coloane Island, Macao. It is one of the existing old villages in Coloane. Lai Chi Van Road begins from the wharf front at the south, and ends at the intersection of Shek Pai Wan Road and R. de Entre-Campos at the north. Cottages and shipyards are built along the hillside in an orderly manner, facing the sea. (See Figure 1) A small bay named “Lai Chi Van” resides in the west of the village. Lai Chi Van is a naturally formed bay with a bowl shape. It is said that in the past, countless lychee trees were planted inside the bay, so people name it “Lai Chi Van”, which means “a bowl full of lychees” in Cantonese. Another explanation being in the past, there were black soldiers stationed in this place. They brought with them sugar-apples, which were later planted in the bay. Sugar-apple is also called “foreign lychee” in Cantonese, which is why they named the place “Lai Chi Van.” As for when the village was first built, historical records was nowhere to be found. However, in the late 19th century, when China and Portugal were settling their demarcation issue, the name of the village appeared several times in relevant historical materials. During this period, Lai Chi Van was at the frontline of Portugal’s border expansion. In 1864, a detachment composed of ten Portuguese policemen were stationed in the village and establish a military base there. Lai Chi Van was gradually put under the jurisdiction of Portuguese Macao.



Figure 1: In 1995, a traditional Chinese schooner is sailing towards Macao. (Source: Horace Bristol/ Getty).

In 2005, the last ship in Macao was built by the city’s only remaining shipyard, Lai Chi Van Shipyard. This once-booming shipbuilding center has manufactured many types of ships, such as shrimp

trawlers with huge fan-shaped sails, and slim-body teakwood dragon boats. But now, inside the once bustling shipbuilding workshop, all you can see are rusty construction materials, and some rubbish that got washed up on the shore, as well as some abandoned boats. (See Figure 2)



Figure 2: The history carried by the now abandoned Lai Chi Van Shipyard is gradually fading away.

3 THE NECESSITY TO REUSE LAI CHI VUN SHIPYARD

The shipbuilding industry of Macao has a long history as the city’s fishing industry. From the remains of Lai Chi Van Shipyard in today’s Coloane, we can vaguely sense the prosperity of trade in the area in old times. The busy maritime trade also promoted the shipbuilding industry in Macao, enabling the shipbuilding technology to reach an extremely high level in the world. Ships built in Macao at that time has a complete set of functions and models, ranging from simple, tiny net casting boats to large-scale electromechanical ships. In the early 1980s, with the decline of inner-harbor shipbuilding industry and the re-planning and construction of road network by the Macao government, the current area from Lam Mau Tong to Fai Chi Kei gradually took shape. In the 1960s, as stipulated by the government, all the shipyards in Macao were relocated to the northwest of Lai Chi Van. At present, only Lai Chi Van Shipyard remains operational in the city. The shipyard has become the only remaining large-scale shipyard in Macao, and the only large-scale shipbuilding industry heritage site in Southern China.

As the carrier of shipbuilding technology, Lai Chi Van Shipyard has been a witness to the evolution of the local industries. In the meantime, the changes in people’s lifestyle and village forms of Lai Chi Van with the rise of the local shipbuilding industry also

witnessed the development course of Macao in old times and the situations of the local shipbuilding industry at that time, demonstrating the changing lives of shipbuilders. (aaMacao.com 2016) As a representative of Macao's cultural heritage, Lai Chi Vun Shipyard is also the epitome of Macao's city spirit. As being said by Oswald Spengler: "What differentiates a city from a village is not its scope and scale, but its inherent city spirit." (Spengler 1988) Today's informative and unique cultural heritage is the witness to and the recorder of the inclusiveness and cohesion of Macao's society for the past 400 years. To protect Macao's cultural heritage, not only should we protect every inch of its historical buildings (endogenous driver), but also allow more people to understand and take part in this movements (exogenous driver). Only in this way can we prevent Macao's city spirit and historical culture from being buried by the progress of history, and inject new and long-lasting vitality in the city.

4 RESEARCHES ON THE REUSE OF LAI CHI VUN SHIPYARD

4.1 Relevant Policies

In "The Outline of the Plan for the Reform and Development of the Pearl River Delta (2008-2020)" issued in 2008, the National Development and Reform Commission (NDRC) of China first proposed the goal of building Macao into a world-class tourism and leisure center, in the hope of developing Coloane's tourism industry. In 2013, the Macao government put forward a protective development plan for the shipyard's remains, proposing that the shipyard in Lai Chi Vun should be converted into exhibition halls and leisure facilities in order to inform the citizens and tourists of the history of Coloane Village and Macao's shipbuilding industry. On July 1st, 2017, President Xi Jinping attended the signing ceremony of the Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area. On October 24th, 2018, the Hong Kong-Zhuhai-Macao Bridge was officially opened to the public. On February 18th, 2019, along with the Central Committee of the Communist Party of China, the State Council issued the "Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area." The issue of policies and the launching of new transportation routes provide strong impetus for in-depth cooperation between Guangdong, Hong Kong

and Macao in political, economic and other realms, and also lay a solid foundation for the fusion between different cultures. In June 2020, five Chinese ministries and commissions, including the NDRC and the Ministry of Industry and Information Technology, jointly formulated the "Implementation Plan for Promoting Industrial Heritage Protection and Utilization in Traditional Industrial Cities", requiring all local regions must "fully understand that besides material forms, we should also pay attention to the institutional and spiritual forms of industrial heritage, with the latter two being the distinctions differentiating industrial heritage from other natural and cultural relics. (Zhang 2020) Basic principles such as "protection first, and utilizing in order to protect" was clarified for developing industrial heritage. Urban living spaces integrating collective memory, knowledge dissemination, creative culture, and leisure services will be protected and created, so that the city's historical connotations can be passed on to the next generation.

4.2 Current Challenges

Through the current research, besides the potential and opportunities for development, Lai Chi Vun is now facing the following challenges:

- 1) Due to the long-term absence of shipyard shed maintenance and renovations, there exists some hidden hazards, endangering public safety and health.
- 2) The shipyard was built centuries ago. The remaining infrastructure obviously can no longer satisfy the needs of modern people. There isn't enough space for public activity and parking.
- 3) The scenery is not tidy, posing negative effects to the overall urban landscape.
- 4) Coloane's terrain is not suitable for building infrastructure. With extensive hills and small flat grounds, the area is not equipped for construction.

4.3 Concrete Measures for Shipyard Reuse

By surveying and mapping Lai Chi Vun Shipyard in Coloane and conducting research on the surrounding environment and infrastructure, the author of this paper identified such four functions for the shipyard as demonstrating the development history of shipbuilding industry in Macao, preserving shipbuilding memory and culture, and developing cultural creativity industries, comprehensive

exhibition centers, as well as education, leisure and entertainment. We have designed two steps for this research.

Step 1: In this paper, the author conducted an online questionnaire to investigate the citizens' intentions on how to reuse Macao's Lai Chi Van Shipyard. A total of 205 questionnaires have been retrieved, all of which turned out to be valid. The majority of the questionnaires were filled out by young and middle-aged people with relatively high educational levels. Therefore, the questionnaires we received were proved to have strong reference values.

By analyzing the data, we collected from the questionnaires, we drew Table 3 and reached the following conclusions: 1) The main challenge we are now facing in the protection and development of Lai Chi Van Shipyard is the lack of unified and complete planning, the absence of which has hindered the shipyard's development. 2) People know little about the shipyard, especially its historical background and the culture behind it. 3) However, most people still believe that Lai Chi Van Shipyard has important economic and culture values, and it is necessary to

take appropriate measures to protect it and innovatively develop modern ways of utilization. Most respondents were in favor of cultural and creative tourism, and the idea of turning Lai Chi Van Shipyard into a demonstration area for modernized integration of culture and tourism.

Step 2: Analyze the resources and urban planning of the surrounding area. Macao's industrial heritage is significantly different from that of other regions. With few cultural resources, the small city generates most of its revenue by selling handicrafts. The future planning of Macao heavily relies on its tertiary industry, mainly the tourism industry. In the government's plan, Coloane has designed urban planning and protection with downtown areas of Rua de Cinco de Outubro, Rua dos Navegantes, Travessa da Cordoaria, Avenida da República as the core. Lai Chi Van Shipyard locates at the proximity of residential areas for local villagers, where architecture of buildings integrates various styles such as Portuguese classicism and the Chinese traditional styles. Examples can be seen in Chinese

Table 1: Descriptive analysis of data collected on local residents' attitude towards the reuse of lai chi van shipyard.

Features	Variables	Frequency	Percentage (%)	Features	Variables	Frequency	Percentage (%)
Age	16-35	20	9.8%	Inhabitant	Downtown	60	29.3%
	36-55	140	68.2%		Taipa	40	19.5%
	Over 56	45	22%		Coloane	35	17.1%
Others					70	34.1%	
Educational level	Junior high school or below	30	14.6%	Value	Economic	145	70.7%
	Senior high school	70	34.2%		Cultural	150	73.2%
	Undergraduate	80	39%		Historical	130	63.4%
	Post-graduate or above	25	12.2%		Other	50	24.4%
Familiarity with the shipyard	Very	40	19.6%	Necessity of protection	Necessary	125	61%
	Moderate	70	34.1%		Moderate	70	34.1%
	Hardly	95	46.3%		Not necessary	10	4.9%
Should we have unified planning?	Yes	30	14.6%	Expectation	Improvement of government services	100	48.8%
	No	125	61%		Environmental improvement planning	120	58.5%
	N/A	50	24.4%		Higher social management level	130	63.4%
Inclusion of cultural creativity					150	73.2%	
Cultural tourism transformation	In favor of	180	87.8%	History preservation in the region	145	71%	
	Against	25	12.2%				

temples, Catholic churches, police stations, markets, libraries, clinics, etc. As Macao vigorously develops its cultural tourism, Lai Chi Vun region can take the shipyard and fishing village as the base to promote artistic activities and develop cultural creativity industry. In the meantime, resources and planning of the surrounding area should be integrated under the overall planning of the city. As for the functions of Lai Chi Vun Shipyard, on the one hand, we should design supporting facilities for cultural tourism; on the other hand, the shipyard should in some way provide supplement for the local community culture. For instance, surrounding environment, buildings and abstract things like the history, culture, etc. can change into creative ideas that are suitable for local residents by combining “people, culture, land, scenery, and industry”

In additions, shipyards and houseboats can be preserved to set up multifunctional “cultural leisure parks”, which will be operated under the principle of “Towards cultural industrialization,” linking the historical memories of the communities and industries, so as to revitalize the local communities and industries. In fact, as the new hope for Lai Chi Vun’s revitalization, the local seamanship and fishermen culture regeneration still have great potential for development. Whether it is the story that once happened in Lai Chi Vun, industrial culture, or the cultural background of the local communities, they are all precious tangible or intangible cultural assets that certainly deserve preservation. Such preservation includes the tasks of preserving, regenerating and activating the cultural assets, and the thoughts about the interaction between these cultural assets and communities, with the goal of further exploring the economic and cultural benefits they can deliver.

It is a pity that Lai Chi Vun doesn’t have any surrounding cultural industries. In the future, we can set aside a broader cultural space during the planning of Lai Chi Vun community, and in such process, present the industrial significance and value of cultural “preservation” and “regeneration.” When I say preservation, I refer to the preservation, planning and exhibition of the shipyard, seamanship, historical architecture and monuments, and major fishing equipment. As for regeneration, the facilities in the surrounding area can be reused or expanded to enhance their cultural benefits. During the planning of Lai Chi Vun community, ideas like “Seamanship Museum”, “Seamanship Culture and Creativity Center”, “Seamanship Workshop”, “Art Market”, “Fishermen Cultural Theater”, “Earth Art Fair” are all excellent ideas.

5 CONCLUSIONS

For cities with scarce resources, tapping into industrial heritage resources can form new economic drivers, developing local economy and at the same time, displaying and passing on the wisdom and spirits in the history and culture of our ancestors. The development of Macao Peninsula is restricted by its small land area. Under this circumstance, revitalizing the offshore islands serves as an inevitable trend in Macao’s development. Facing the scarcity of tourism resources, as we tap into new tourism resources in Coloane, we should protect and reuse the existing valuable industrial relics in Coloane, so that we can embed the collective memories of the shipbuilding industry in Macao’s history and culture, and pass them from generation to generation. Therefore, “the path of developing the city’s cultural creativity industry, with low energy consumption, high cultural values and high returns, is certainly suitable for Macao.” (Wang 2013)

During the protection of Lai Chi Vun Shipyard, besides protecting its historical relics, more importantly, we should protect and develop the cultural and environmental factors behind those relics. As for protection, no more cultural buildings should be built; instead, researches shall be conducted to form balanced considerations. When developing Lai Chi Vun’s creativity industry, we should further exploit the historical and cultural resources of related industries while refraining from pursuing trivial matters, so as to provide more directions for the sustainable development and the reuse of Lai Chi Vun Shipyard.

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