Activation of Traditional Villages in Dapeng New District, Shenzhen, China — A Case Study on Wangmu walled-village

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Abstract. In this paper, a case study is conducted of Wangmu walled-village, a traditional village in Dapeng New District, Shenzhen, China. It introduces the historical evolution, location overview and current situation of typical traditional Hakka’s walled-village in the eastern part of Shenzhen. With Wangmu walled-village as an example, the settlement space and architectural value of existing walled-village are analyzed. Further, based on a value judgment, the feasibility of activation and application of Wangmu walled-village in the future is explored. An activation scheme is drawn up based on the current situation of the walled-village. Those will provide ideas and suggestions for the activation and promotion of similar traditional villages.

1. Introduction

1.1. Historical evolution of Hakka's walled-villages

The term “enclosed village” refers to a village surrounded by buildings or walls, and the original role of “enclosing” was mainly military defense. In Guangdong province, south China, Hakka's walled-villages are mainly distributed at a critical point or miscellaneous area, Teochew people or Cantonese people. The existing Hakka's walled-villages in Shenzhen were primarily built in the late Qing Dynasty and the early Republic of China. During the Ming and Qing Dynasties, Japanese pirates were rampant in coastal areas. To reinforce defense capability, an enclosing wall construction was taking form. In terms of distribution areas, Hakka's walled-villages are influenced, to some extent, by Cantonese culture and Teochew culture, which retain some typical traditions of Hakka residential dwellings in shape and structure, such as the moon pond and threshing ground in front of the village. They are also influenced to some degree by Guangfu villages. For example, the pot-handle-shaped gable was used for residential dwellings and gun turrets; vernacular houses had the bucket corridor style, block style, etc. (Figure 1).
Hakka’s walled-village is laid out in a grid pattern, surrounded by buildings or walls, with turrets arranged at the four corners. The overall planes are square or rectangular, and a few are irregularly round. The houses in the enclosure are mostly flats, and a few are horizontal ones (with rooms on both sides in front of the main room) and single-room type, showing two plane forms of “bucket-corridor type” and “block style.” Following the Hakka culture, ancestral halls were usually laid out in the enclosure. According to the location and distribution of the ancestral halls in the enclosure, they can be divided into two categories: walled-village with a single family name and those with multiple family names. Those with a single family name have an obvious central axis, with ancestral halls laid out along this axis. However, those with multiple family names have no obvious central axis, and the ancestral halls are distributed at the rear part of the enclosure, near the walls.

Hakka’s walled-village in Shenzhen can be divided into four types according to architectural forms and layout characteristics: walled-village with buildings; walled villages; water-walled villages; and walled villages with watchtowers. Wangmu walled-village is a typical Hakka walled-village with multiple family names.

2. Wangmu walled-village

2.1. History of Wangmu walled-village
The walled village was founded in the Ming Dynasty, and was one of three military station villages in Dapeng Ancient City in the early Ming Dynasty. The walled village was rebuilt in the fourth year of the
Republic of China (1915), and the pond and other public areas were rebuilt in 1989. On January 13, 2012, it was declared a general immovable cultural relic by the administration of Longgang District, Shenzhen, China. The ‘13th Five-Year Plan’ for urban renewal in Shenzhen was listed among the urban villages unsuitable for demolition and reconstruction, classified as innovated space with comprehensive improvement (Figure 2).

2.2. Location

Wangmu Community, where Wangmu walled-village is located, belongs to Dapeng Sub-district Office under the jurisdiction of Dapeng New District in the east of Shenzhen, China. Dapeng New District is oriented as a functional area dominated by tourism, with coastal defense, fishing and farming, fishing village and Hakka culture as its typical cultural characteristics. On the south of the enclosed village is the wedding photography base, Rose Town; on the east is the Dapeng Revolutionary Struggle History Exhibition Hall; and on the west and north are residential areas and living facilities.

2.3. Buildings in the enclosed village and the current situation

Wangmu walled-village is located at the southeast corner of Wangmu Community, taking up about one-sixth of the community's land. The inside and outside of the walled-village are relatively independent. From south to north, the inside of the enclosed village is divided into nine alleys. Apart from the main entrance to the walled-village, only the west side of Alley 8 and Alley 9 can lead to the outside. On the whole, the village faces south, with a width of 81 meters and a depth of 65 meters, covering an area of about 5,300 square meters. In the front of the enclosed village is threshing ground and a moon pond, and in the south is the main gate. The buildings in the enclosed village are neatly laid out with nine distributed horizontally and five vertically, showing no obvious central axis (Figure 3).

![Figure 2. Aerial View of Wangmu walled-village. (Source: provided by Jing Xiao)](image1)

![Figure 3. General layout plan for Wangmu walled-village Community, ①-⑨shows nine alleys. (Source: drawn by Wenzheng Deng)](image2)

Traditional dwellings and newly-built modern buildings coexist in the enclosed village. White walls and gray tiles mainly characterize the row houses. In the style of Lingnan vernacular houses in the Qing Dynasty, the buildings have one or two stories, forming a sense of rhythm with scattered levels. The buildings' primary materials are brick, stone, earth and wood, and the roof is covered with gray tiles. The exterior facade is old, and the internal structure is relatively well preserved. The newly-built houses in the enclosure were constructed on the original sites of the damaged row houses, and all of them are brick-concrete structures, with two to four stories. Their styles are basically the same as those of the houses outside the walled-village, causing severe damage to the overall appearance within the enclosure.

The space in the enclosure can be roughly divided into two categories: alley space and green space between houses. The alley space is relatively narrow. In addition to a 9m-wide air drying area between the walls of Alley 1 and the row houses, the width of the other eight alleys is 1-3m. In addition, there
are open ditches on one side of the alleys, so the spatial qualities is poor, only accessible by pedestrians. The green area between the houses is actually the open space left after the demolition of row houses. Half of it is abandoned and overgrown with grass and weeds, while some areas are used for planting crops.

3. Value Analysis and Classification of Existing Buildings in Wangmu Community

3.1. Value analysis of buildings

After relatively detailed visits and investigations of the entire Wangmu Community, analysis graphics were drawn for the current situation of buildings (Figure 4), including graphics for building quality, building style, number of stories, building structure, building function and public open space utilization. Based on this, the value of buildings in the enclosed village was preliminarily analyzed.

![Building Style Chart](image1)
![Building Quality Chart](image2)
![Building Structure Chart](image3)
![Building Function Chart](image4)
![Building Floors Chart](image5)
![Public Space Utilization Chart](image6)

**Figure 4. Current situation analysis of buildings in Wangmu walled-village Community (Source: drawn by Wenzheng Deng)**

3.2. Classification according to the architectural value

Based on the investigation of buildings inside and outside the enclosed village and the analysis graphics drawn for the current situation of buildings, the architectural value of the whole Wangmu Community is classified as follows (Figure 5):

(1) The wall in the south, main entrance gate, the “bucket corridor-style” ancestral hall within the enclosure, the Jiyang Hall outside the enclosure, and the Chen Gun Turret and the Lin Gun Turret outside the enclosure are classified as the first type of buildings with the highest value. These kinds of buildings have the highest historical value, and excellent style, which is basically preserved well. They are symbols of Wangmu walled-village and have a strong cultural quality. However, they have lost their original function, so it is suggested that they should be properly re-purposed on the premise of complete protection.

(2) The other two “block-style” ancestral temples and the other traditional row houses in the enclosure are classified as the second type of buildings with high value. With high historical value and good style, they are preserved well, and mainly provided for tenants to live in. It is suggested that protection and repair should be prioritized.
(3) The modern houses privately built in the enclosure are classified as the third type of buildings with low value. Although the structure is intact, they have poorer architectural style than their traditional surroundings, thus damaging the unity of the architectural styles in the enclosure. Therefore, they require a comprehensive transformation in appearance.

(4) The abandoned buildings and dangerous buildings in Dapeng Adult School are classified as the fourth type of buildings, which can be demolished. With poor appearance and poor quality, this kind of building has no useful function and may collapse.

In addition, the author also evaluates the open space in the community, and selects a number of areas as land for an extension, where new buildings are prohibited to improve the quality of outdoor space in the enclosure.

4. Research on Value-based Activation Strategy

4.1. Satisfying basic needs

The activation of Wangmu walled-village should be based on the current situation of the community in the urban village. The land is mainly used for residence. Only after the most basic livelihood security is satisfied for residents can they further participate in the activation of Wangmu walled-village community. First, in terms of population composition, the residents within the enclosure are mainly tenants, and the natives of Wangmu walled-village account for the majority outside the enclosure. The elderly form the majority in the whole Wangmu walled-village community, accounting for 65%. Second, there are many problems involving community infrastructure. For example, the markets are too far away; public toilets are remote; public air-drying areas are distributed unevenly; and leisure and entertainment facilities are lacking. Third, in terms of transportation, there are serious problems of pedestrian-vehicle mix outside the enclosure, narrow alley space in the enclosure, apposition of roads and open trenches, and very low quality of alley space.

4.2. Value-oriented Activation Strategy

Based on an analysis of the value of existing buildings in Wangmu walled-village, the area for architectural and spatial renewal was first delineated. The first and second type of buildings are included in the scope of protection and repair; the third type of buildings is included in the scope of renewal and
reformation; the fourth type of buildings is included in the scope of demolition and reconstruction; and the rest of the buildings in the community are left in their original state.

4.3. Activation of traditional elements
The cultural value of Wangmu walled-village lies in the integration of Hakka and Cantonese culture in Shenzhen, with the dilapidated row houses, walled-village and the characteristic local culture it has nurtured. Buildings have become the carrier of this special traditional culture. The author has tried to extract these elements from the buildings and apply them to the transformed and renovated buildings and space to evoke people’s memory of the local culture in Wangmu walled-village (Figure 6).

4.4. Activation scheme
The activation scheme is divided into two phases. Phase 1 focuses on the repair and renewal of buildings according to their value; Phase 2 focuses on organically connecting various buildings, thus forming a whole and achieving the effect of activating the community (Figure 7).

Phase 1:

1. Moon pond Square
2. Traditional Shops
3. Revolutionary Culture Museum
4. Roof Garden
5. Bookstore
6. Community Vegetable Garden
7. Tea Room
8. Village History Museum
9. Chess Room
10. Community Sports Hall
11. Elderly Care Center
12. Gun Turret Culture Museum
13. Community Theater
14. Community Green Plaza
Regarding the first type of buildings, (1) the enclosure wall in the south, entrance doorway and entrance hall of Wangmu walled-village are repaired and renovated. The enclosure wall in front of the moon pond in the community is demolished. The open space in front of the moon pond is built into an outdoor space, open to the outside of the community, becoming a publicity sign for external display. (2) The “bucket corridor-style” ancestral hall in the northeast corner of the enclosure is repaired, and transformed to the village history hall in function. (3) The Chen Gun Turret and Lin Gun Turret outside the enclosure are repaired and preserved, the privately-built parts are removed, and the surrounding environment is improved. The gun turrets are transformed into a cultural exhibition area. Besides, supporting leisure facilities are established as a base for a cultural experience. (4) The Jiyang Hall on the west side outside the enclosure is repaired and preserved, with original chess and card rooms maintained. In addition, the air-drying area and parking spots in front of the entrance are transformed into an entrance leisure square to maximize the entertainment function of the Jiyang Hall.

![Figure 8. Wangmu walled-village activation plan rendering: north part of Wangmu walled-village to newly designed Elderly Care Center (Source: drawn by Wenzheng Deng)](image)

Regarding the second type of buildings, that is, the row houses and two "block-style" ancestral halls in the enclosure, (1) The row houses in Alley 2 to Alley 8 are repaired and renovated; the lighting, ventilation and exterior features of the buildings are improved; the alley space and the open space between the houses are made better; the alley pavement is unified into the roadway, paved with boulder strips; drainage ditches are hidden; lighting is added; and the open space between houses is transformed into creative vegetable gardens. (2) The row houses in Alley 1 and Alley 9 are modified, with the functions replaced; those in Alley 1 are transformed into small business streets, with functions including a snack bar, grocery store, retail department store, garage, laundry, barbershop for satisfying external requirements; those in Alley 9 are transformed into book stores in the community. The tenants who originally lived in Alley 1 and Alley 9 can move into the vacant houses in Alleys 2-8, thus solving the problem of resettling tenants after the function of their alleys is changed.

Regarding the third type of buildings, that is, privately built modern houses in the enclosure, the point-like renewal method is adopted. First of all, for the buildings with three stories or more, the non-load-bearing structures above the second storey are removed, and the structural parts of the third storey are retained at most, and then transformed into an open roof garden. Those with less than two stories can be transformed into structures with pitched roofs so that the appearance is similar to that of row houses. Secondly, in terms of function, the modern houses are transformed into public functions, such as chess hall, book store, teahouse, community vegetable garden, etc., mainly for residents within the enclosure. The row houses within the enclosure had a single function, in the past, there were no other types of buildings besides residential buildings. Setting the function of the transformed buildings as
public buildings for residents’ gathering and communicating in the enclosure can play the role of activating the atmosphere in the community. The modern buildings can be combined with the transformed creative vegetable gardens between the houses to create public activity spaces for moderate relaxation in the enclosure.

Regarding the fourth type of buildings, namely, the abandoned dangerous buildings in Dapeng Adult School, considering that a vacant lot equivalent to the Wangmu walled-village in the area will be left after the complete demolition, it is necessary to carry out planning and comprehensively update the buildings’ function. In terms of overall plan, the vacant space in the northwest of Wangmu walled-village is used as the entrance square to bring the flow of people into the community; the vehicle entrance is set in the north of the plot as a logistics corridor; the community walls are added in the east of the plot. The form refers to the walls of Wangmu walled-village, and an entrance is set into the wall to attract the flow of people outside the community. With the existing texture of Wangmu walled-village taken as reference, four rows of row houses are built on the plot of Dapeng Adult School: those of the first row are located in the original dangerous buildings, parallel to Alley 9 of Wangmu walled-village. Its function is set as a table tennis hall for the community, which is connected to the community book house in Alley 9. The size and height of the bays are similar to those of the row houses in Alley 9, forming transitional space in the buildings. The last three rows are set as community care centers mainly for the seniors, and the centers include a canteen and school for the elderly, chess and card room, nursing center, screening hall, outdoor theatre, etc., breaking through the restrictions of traditional villages in terms of bay size (Figure 8).

Phase 2: Organic connection of various buildings

Its internal spatial organization is reasonable, and the overall style of buildings is unified. Taking the process of connecting the internally transformed area in Wangmu walled-village and reconstructed area on the plot of Dapeng Adult School as an example:

(1) spatial organization: the flow of people is smaller within the enclosure, where they mainly live. In the area of Dapeng Adult School are public buildings, where the flow of people is more remarkable, so there should be buffer and transition space between the two. According to the plan in Phase 1, the open space on the north of the enclosure is the center of the entire Wangmu walled-village community and it can be transformed into a pedestrian traffic hub and square.

(2) Style management: the height of buildings in Wangmu walled-village will be controlled below 7.5 meters, generally maintaining the style of traditional Hakka residential houses; and the elderly care center is about 10m high, with a large volume. On the whole, the residential elements are adopted to echo the traditional cultural characteristics of the enclosed village (Figure 9-10). The community book house and table tennis hall in Alley 9 serve as the transition between the row houses and the elderly care center in the enclosure (which is completely new), playing a transitional role in terms of architectural scale, image, and space.
(3) The lighting of the traditional row houses in the enclosure is seriously insufficient. In the process of transforming them into the book house, the original roofs are replaced with light, steel skeletons, and lighting windows are installed, which not only maintains the original building volume and height, but also avoids damaging the overall style. To a certain extent, this completes the transition from inside to the outside of the enclosure and from the traditional to modern style (Figure 11).

![Figure 11. Analysis of Longitudinal Section and Skyline of Wangmu walled-village, Reactivation Plan (Source: drawn by Wenzheng Deng)](image)

5. Conclusion
Wangmu walled-village acts as a representative of traditional villages in Dapeng New District of Shenzhen. Its activation mode is worth further study and will be adjusted and promoted according to the observed effects. Among architectural heritages, Wangmu walled-village does not have high value itself, but it does have historical and cultural value beyond ordinary urban villages. Therefore, it should not be treated only in a certain way. This kind of urban village, with a particular cultural heritage, should be activated. First of all, it is necessary to fully explore the associations of the architectural culture and carefully apply them in the process of adding and rebuilding buildings. Furthermore, a lot of research is required, and villages should be activated and renovated based on the residents’ needs, fully respecting the intention of residents so that satisfactory living space can be provided for local residents and visitors in the future.

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