

# Effect of Hue Citadel on the Layout of Traditional Garden Houses Located in Its Area, Vietnam

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**Abstract:** In Hue, the city located in the middle region of Vietnam, the Citadel is known as the place of the last Dynasty in the history of Vietnam, Nguyen (1802-1945). Whereas Nguyen Kings lived in the Purple Forbidden City (the third wall of the Citadel), other members of royal families and high-ranking mandarins lived in Hue Traditional Garden Houses (HTGHs) constructed around and in the Citadel area. This paper is a part of the research that focuses on an approach for sustainable live conservation and application of HTGHs into contemporary use. In this paper, the study aims to consider effects of the Citadel on the layout and arrangement of HTGHs located in its' area by studying alteration in layout elements of those house. Based on field surveys of 91 HTGHs in the Citadel area, it is found that although those houses are altered into various configurations under the impacts of urbanization and modernization, several important traditional elements in layout such as *Binh Phong* (masonry screen), *Be Can* (basin), and facing orientation have been maintained, and their layouts reflect a miniature image of Hue Citadel, i.e., there is an integral relationship between the Citadel and HTGHs located in it. This relationship plays an important role for expressing one of unique characteristics of Hue cultural asset, which is unavailable in other regions of Vietnam.

**Key words:** Hue citadel, hue traditional garden house, layout, urbanization.

## 1. Introduction

Hue, the ancient capital of the last Dynasty in the history of Vietnam, Nguyen (1802-1945), is known as a Garden city because of its greenery covered by green landscapes, garden tombs, garden royal palaces and especially, traditional garden houses. Whereas Nguyen Kings built the Citadel and lived in the Purple Forbidden City (The third wall of Hue Citadel), other members of royal families and high-ranking mandarins lived in Hue Traditional Garden Houses (HTGHs) constructed around the Citadel. Thus, those HTGHs are widely distributed in the Citadel area and in ancient villages surrounding such as Kim Long, Vy Da, Nguyen Bieu and Phu Cat (Fig. 1).

Many factors such as living style, religious beliefs, building code imposed by Nguyen Dynasty and also the decisive thought of Nguyen Kings for constructing the Citadel made a great impact on the formation, built

form and layout of HTGHs. These factors have formed the unique characteristics of HTGHs, which could not be observed in traditional houses in other regions of Vietnam. Thus, HTGHs are considered as one of integral elements contributing to the cultural characteristics of Hue region.

Due to the impacts of rapid urbanization, economic development, population growth and flood disaster, HTGHs, especially those located in the Citadel area have been demolished and converted into various configurations. For example, dwellers of those houses sold some parts, built new annexes, subdivided the land into many pieces due to the growth of family members, while some functional space were altered and/or extended without uniformed adapting to modern lifestyle. This is really a heavy loss of Hue architectural heritage.

Even though HTGHs have been much transformed, there is a hypothesis that several important elements of those houses still maintain and express the relationship with the Citadel. Therefore, this paper aims to examine

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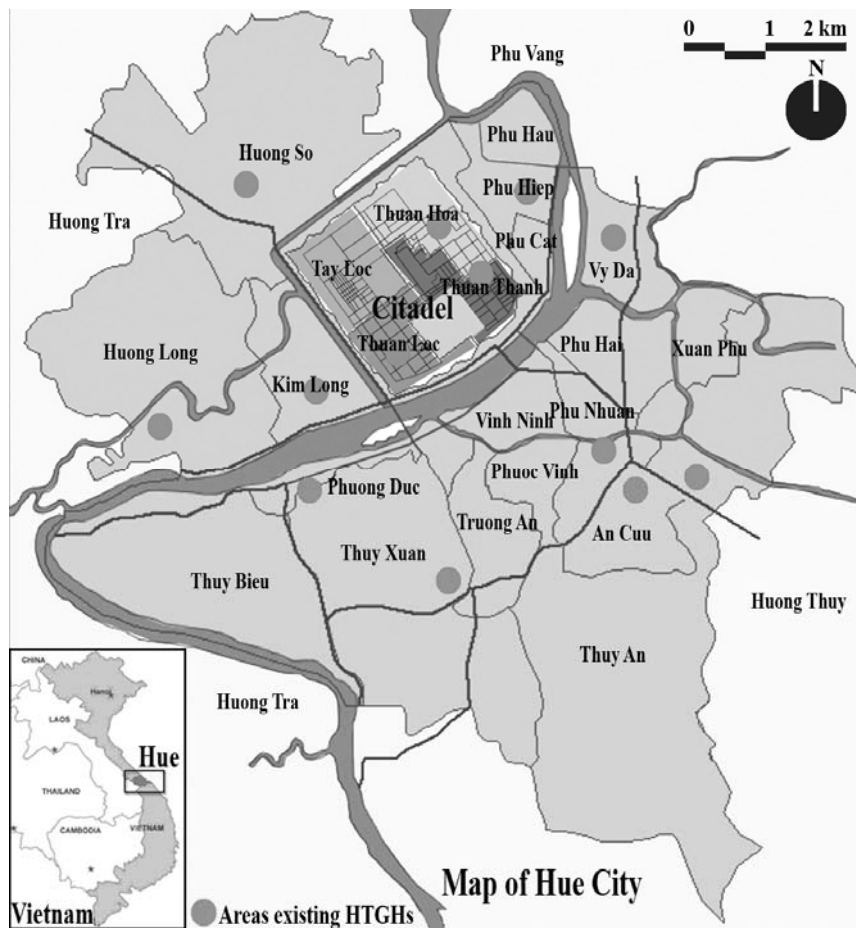


Fig. 1 Map of Hue and distribution of HTGHs (black circles).

the formation of Hue Citadel and HTGHs in its inner areas, and then to study the alteration in layout elements of those houses for finding the relationship with the Citadel.

## 2. Methodology

The methods of this study are primarily based on field surveys of 91 HTGHs in the Citadel area for collecting physical, sociological and historical data. Besides, the secondary data are building codes and laws relating to construction of the Citadel and HTGHs, and socio-economic conditions influencing of formation and transformation of HTGHs. In addition, all forms of data such as reports, newspaper articles, old pictures and photographs of immediate relevance to the Citadel and HTGHs are also collected and used as basic source materials. Finally, an analysis of

correspondence between the Citadel and those HTGHs will conduct an evidence of the above hypothesis.

## 3. Previous Studies

After Hue was registered on the list of the World Cultural Heritage Site by UNESCO, many studies have mentioned and researched different aspect of Hue Citadel such as An and Son [1-3] (An [1] mainly introduce architecture of Hue monuments including the Citadel. According to his book, Hue Citadel is constructed based Feng Shui principles and Vau Ban architectural style, the typical defence rampart in the West. Son [2, 3] claims that the formation of Hue Citadel expresses repetition of use of former palace sites because ancestors of Nguyen Dynasty, Nguyen Lords have ever used the place of the Citadel for their palaces named Phu Xuan). On the other hand, the

studies related to HTGHs have not been extensively focused even though they have played an important role for contributing on the hidden charm of Hue city. One notable work, Tinh [4] describes physical characteristics and spatial organization of Hue traditional houses, *Ruong* and *Roi* (commonly called Ruong house and Roi house, are the wooden structure of typical traditional house in Hue and neighboring regions such as Quang Binh and Quang Tri Provinces. Ruong house is developed from Roi house. They are usually Nha Chinh (main house) of HTGH. However, we have not found any Roi house in the Citadel area yet), which are the main house of HTGH in this study. Another study, Thuy [5] provides three typical layout types of garden houses based on illustration of four samples (garden house here includes traditional garden house and modern garden house). Up till now, there is no previous study researching transformation process of HTGHs and the relationship between Hue Citadel and HTGHs located in its area thus, this study could be an initial and useful source for strategies of sustainable conservation of the Citadel and those HTGHs into contemporary use.

#### 4. Formation of Hue Citadel

The Citadel was constructed in 1805 by the first King of Nguyen Dynasty, Nguyen Anh (1802-1820). The location of the Citadel is known as the best place for setting up the royal architecture because it contains auspicious geographical features such as river, plain and other metaphorical characteristics representing fertile, verdant and luxuriant attributes. According to Feng Shui principles, Huong River (representing Bright Court) passing in front of the Citadel can bring fortune for the Dynasty since water means wealth, prosperousness and power. Ngu Binh Mountain (representing Peacock) serves as screen, which can prevent from evil spirit, while Hen and Da Vien sandbanks (representing Left Green Dragon and Right White Tiger, respectively) are as two guardians for the Citadel (Fig. 2). Orientations of sandbanks are counted



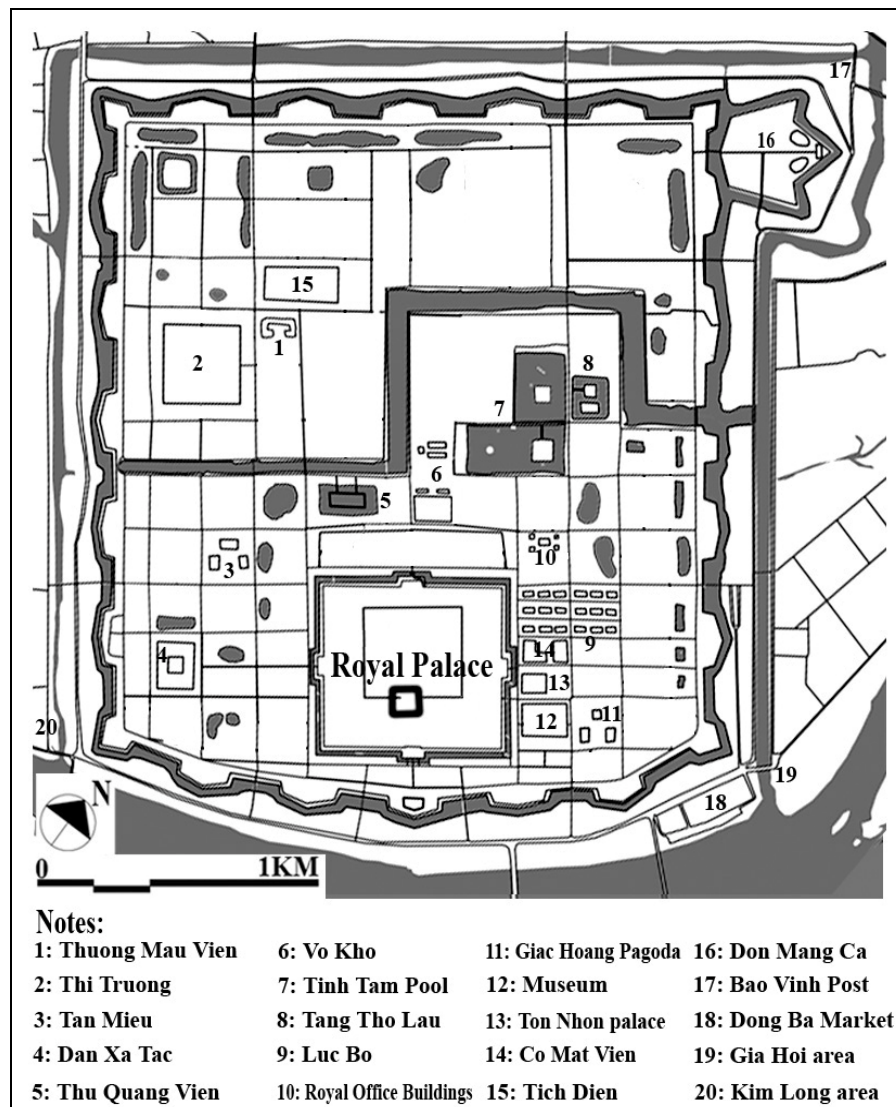
Fig. 2 Impact of feng shui principles on Hue Citadel.

when sitting in the Citadel and looking Ngu Binh Mountain, thus Hen will be in the left side and Da Vien will be in the right side of the Citadel.

The Citadel is surrounded by three ply-walls, which are Citadel wall, Imperial wall and Purple Forbidden wall. Area inside Imperial wall is the working places of Nguyen Dynasty, while living places for the King and his family are inside Purple Forbidden wall. The area within the Citadel and outside Imperial City was initially divided into 95 checkerboard quarters and each quarter (around 1000 sq.m) was the ward assigned by Nguyen Dynasty [6]. Normally, there were one or two royal buildings, garrisons, or temples located in each ward. Other quarters were granted to mandarins and civilians for building their houses.

In the period of Tu Duc King (1847-1883), the French colony seized control the city (After the reign of Tu Duc, there were nine Kings of Nguyen Dynasty but they were just nominal position). This statement caused emergence of many small streets with influx of many residents. By 1909, most of royal buildings are placed in the Northeast side such as *Luc Bo* and *Co Mat Vien*, while other recreation royal buildings are scattered in other sides such as *Thuong Mau Vien* and *Tang Tho Lau* (Fig. 3).

In 1945, Nguyen Dynasty was collapsed. Then, Vietnam had been in state of the war against the French colonization, American colonization and Puppet



**Fig. 3 Hue Citadel in 1909.**

(1) Thuong Mau Vien and (5) Thu Quang Vien were the beautiful famous gardens for recreation of royal families. (2) Thi Truong was the place for doctoral competitive examination of Nguyen Dynasty. (3) Tan Mieu, the place for worshipping Duc Duc King, was built in 1891. (4) It was the place for worshipping the Earth Genie. (6) Vo Kho was the arsenals of Nguyen Dynasty. (8) Tang Tho Lau was the archives of Nguyen Dynasty. It is used for tourism at present. (9) Luc Bo was the six ministries of Nguyen Dynasty. At present, this area is used for government offices and residents. (11) Giac Hoang Pagoda was the palace of Ming Mang King when he was the prince. Then, it was converted to the pagoda in 1839 by Minh Mang King. At present, it is the office of Hue Monuments Conservation Centre. (12) Museum was the recreation place of the princesses and princes of royal families. In 1909, it was the library office named “Long An” of Nguyen Dynasty. It was converted to Khai Dinh Museum in 1923. At present, it is the museum of Hue named “My Thuat”. (13) Ton Nhon Phu and (14) Co Mat Vien were royal office buildings. (15) Tich Dien was the place that the King ploughed and worshiped the Emperor Shen Nong. (16) Don Mang Ca was military area. (17) Bao Vinh Port was replaced by the concrete bridge for connecting to Bao Vinh area, the ancient town under Nguyen Dynasty. (18) Dong Ba Market is the biggest market of Hue at present. (19) Gia Hoi area was another commercial ancient town under Nguyen Dynasty. (20) Kim Long is an ancient village in Hue.

Regime for thirty years (1945-1975). The Citadel area became place that people evacuated for avoiding war attacks. After Vietnam became the unified country, the Capital was moved to Hanoi in the North Vietnam. Hue

has been the main city of Thua Thien Hue Province and it is growing as one of the main tourist destination in Vietnam.



## 5. Formation of Traditional Garden Houses in Hue Citadel Area

When HTGHs in the Citadel area were firstly built is not yet clear. Several reliable documents, however, asserted that the first HTGH had been formed during the reign of Ming Mang King (1820-1841) (when Ming Mang granted HTGH to his prince: “Grant garden house for using as place of recreation and reading book, hence the prince should concentrate to study...”.) After that, HTGHs could be constructed as dwelling houses for royal families and high-ranking mandarins. Finally, ordinary people could build their HTGHs for living if their financial abilities are permitted.

Fig. 4 illustrates a standard layout of a typical HTGH, which is normally composed of *Nha Chinh* (main house), *Nha Phu* (annex house), *Binh Phong* (screen), *Be Can* (basin), symbols of *Ta Thanh Long* (Left Azure Dragon) and *Huu Bach Ho* (Right White Tiger), garden, alley, hedge and gate. Normally, *Nha Chinh* is *Ruong* house, which is usually served as place for worship, living room and bedroom, while kitchen, dining room and storage are in *Nha Phu*. As mention above, under the impacts of urbanization, population growth, economic development, HTGHs have been altered/converted into various configurations. However, these houses have still maintained several important elements that express a relationship with the Citadel. This is the purpose study of the paper.

## 6. Field Survey on 91 Htghs in the Citadel

In 1997, the number of traditional houses located in the Citadel area was around 101 (Statistic data of Thua Thien Hue People’s Committee). However, several houses among them are not HTGHs. After rechecking the list of those houses since 2005, it is found that several houses among them are ancient French housing style, while some houses were converted into new house types. In addition, there are also some houses that are not really traditional houses even though the elements and designs on the facade are similar to those



Fig. 4 Layout composition of a HTGH.

of traditional houses. Thus, there are 91 HTGHs are surveyed for finding the relationship of them with the Citadel by analysing their location, facing orientation and alteration in layout elements.

### 6.1 Location of Surveyed HTGHs

The location of these 91 HTGHs is illustrated in Fig. 5. The figure shows that most of HTGHs concentrate on the Northeast side of Imperial City with nearly two-third of the 91 houses. In contrast, there are few HTGHs that are located in other sides. As mentioned in the chapter 4, the Northeast side was the place of many royal office buildings of Nguyen Dynasty in the past for working of mandarins. Therefore, many HTGHs of mandarins were built around this side for the convenience of their activities. This implies that the administrative function of the Citadel have influenced on the location of those houses.

### 6.2 Facing Orientation of *Nha Chinh* in 91 Surveyed HTGHs

According to the checkerboard planning of the citadel, it could be concluded that *Nha Chinh* of HTGHs can face four orientations: Southeast, Northeast, Northwest, and Southwest. Among 91 surveyed HTGHs, *Nha*

*Chinh* of 40 cases faces the Southeast (44%), while eight cases face the Northwest (Table 1). Normally, the orientation of *Nha Chinh* faces the entrance gate (The roof is laid parallel with the street as shown in photo 1 in Fig. 6). However, among the above 40 HTGHs, there are seven houses having two possible orientation choices because their compounds face two streets (The photo 3 in Fig. 6) while there are six cases having the entrance in the direction different from the facing

orientation of basic *Nha Chinh* orientation (The photo 2 in Fig. 6). Thus, the Southeast could be the typical orientation of *Nha Chinh* of HTGHs in the citadel area. If *Nha Chinh* has two possible orientations and the Southeast is one of them, it will be chosen.

The above analysis implies that the choice of orientation of *Nha Chinh* in the citadel area relates to the facing orientation of the citadel because the citadel



Fig. 5 Distribution of 91 HTGHs.

Table 1 The facing orientation of *Nha Chinh* of 91 HTGHs.

Orientation	Southeast	Southwest	Northwest	Northeast
91 HTGHs	40 (44%)	15 (16.5%)	8 (8.8%)	28 (30.7%)

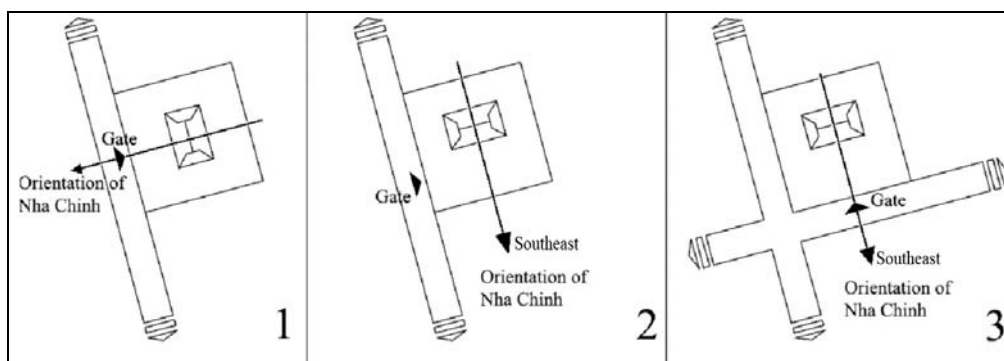


Fig. 6 The pattern of facing orientation of HTGHs.

also faces the Southeast, which is known as the best orientation that can bring back prosperity for the Kings. This orientation concept can be explained based on the religious belief in Hue people. In the past, the owners of HTGHs always wanted to express their faithfulness to the Kings so a way to express that is by making *Nha Chinh* faces to the same orientation as the citadel.

### 6.3 Layout Elements of Surveyed HTGHs

Based on the survey, the existing elements in layout of 91 surveyed HTGHs are tabulated in Table 2.

#### 6.3.1 Alteration of Gate and Fence

There are 77 HTGHs, which have both gate and fence, while the other HTGHs do not have either gate or fence. From the interview with inhabitants, most of HTGHs without gates seemingly used to have gates and fences at the beginning but they were destroyed by the owners or for the street extension. Five positions of gate could be found as illustrated in Fig. 7. The figure demonstrates that the gates of HTGHs are usually placed in position 3 (34 houses) and position 2 (21 houses), while position 5 is the rarest case with only 2 HTGHs. Most HTGHs with the gates in position 3 have

*Binh Phong* located in the middle behind the gate except in seven houses, which do not have *Binh Phong* because they were destroyed by the owners or the streets extension.

According to the survey, there are 20 HTGHs, which have green hedges of various plants such as Chinese tea, Hibiscus, and brushwood (Fig. 8). Fences of the other 57 HTGHs are made of permanent materials such as brick and grille. However, at least 13 houses among the above 57 HTGHs originally had green hedges. It indicates that the green hedges have been gradually replaced by other types of permanent materials.

#### 6.3.2 Alteration of Alley

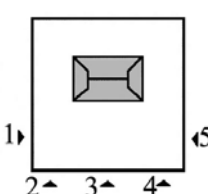
At present, most HTGHs in the citadel area do not have an alley. Alley can be observed in 17 HTGHs. Normally, the width of the alley is small about 0.9-1.5 meters and it is used for leading guest from the gate to *Binh Phong* and turn into *guestroom* in *Nha Chinh* (Fig. 9). Land subdivision may be the main reason for the gradual disappearance of the alleys.

#### 6.3.3 Alteration of Binh Phong, Be Can, Ta Thanh Long and Huu Bach Ho

**Table 2** Existing elements in layout of 91 surveyed HTGHs.

	Gate & Fence	Alley	<i>Binh Phong</i>	<i>Be Can</i>	<i>Ta Thanh Long-Huu Bach Ho</i>
Number	77	18	55	44	20

	Position of gate	Number (Percent)
	1	11 (14.3%)
	2	21 (27.3%)
	3	34 (44.1%)
	4	9 (11.7%)
	5	2 (2.6%)

**Fig. 7** Positions of gates in 77 HTGHs.



**Fig. 8** Examples of hedges and fences of HTGHs in the Citadel area.





Fig. 9 Example of alley in a HTGH in the Citadel area.

Table 2 shows that among 91 surveyed HTGHs, 55 houses have *Binh Phong* (60.4%) and 46 houses have *Be Can* (50.5%), while the symbols of *Ta Thanh Long* (left Azure Dragon) and *Huu Bach Ho* (right White

Tiger) appear in 20 houses (22%). Normally, *Binh Phong* could be a brick screen (41 HTGHs) or green screen (14 HTGHs) of tree and/or brushwood. *Be Can* could be a small basin or rock garden. The symbols of *Ta Thanh Long* and *Huu Bach Ho*, normally, are flowerpot or bonsai (Fig. 10).

As mentioned in chapter 4, *Ngu Binh* Mountain and *Huong* River represent the screen of the Citadel, while *Hen* sandbank and *Da Vien* sandbank serve as its two guardians. In HTGHs, *Binh Phong* and *Be Can* play the same role as *Ngu Binh* Mountain and *Huong* River of the Citadel respectively, while the symbols of *Ta Thanh Long* and *Huu Bach Ho* of HTGHs are like *Hen* and *Da Vien* sandbanks of the Citadel, respectively. This demonstrates that, the layout of HTGHs reflect a miniature image of the Citadel (Fig. 11).



Fig. 10 Examples of *Binh Phong*, *Be Can*, and symbols of *Ta Thanh Long* & *Huu Bach Ho*.

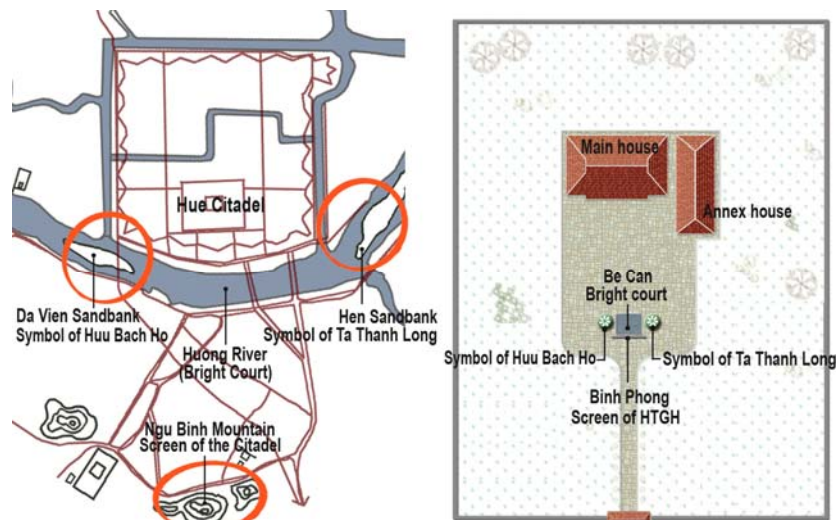


Fig. 11 Correlation of layout between the Citadel and HTGH.



According to the survey, the elements of *Binh Phong* and *Be Can* can be observed in 42 HTGHs, while only 18 houses have elements of *Binh Phong*, *Be Can*, and symbols of *Ta Thanh Long* and *Huu Bach Ho*. It is seemingly that *Binh Phong* and *Be Can* still exist in most HTGHs, while the symbols of *Ta Thanh Long* and *Huu Bach Ho* tend to disappear in the modern arrangement. Although the information about the original elements of several HTGHs were inadequate due to no records, it seems logical to claim that the original elements in layout of those HTGHs have been gradually reduced. Urbanization, street extension, growth of family member, land speculation and business venture are the main causes of the gradual disappearance and transformation of these elements. However, the symbols of *Binh Phong* and *Be Can* have been maintained in many HTGHs and also risen in other buildings in Hue.

## 7. Conclusion

Based on an analysis of 91 HTGHs in the Citadel area, the relationship between those houses and the Citadel area could be summarized as follows.

(1) The formation of Hue Citadel is based on Feng Shui principles. Huong River represents Bright Court, while Ngu Binh Mountain serves as screen of the Citadel. Besides, Hen and Da Vien sandbanks serve as its *Ta Thanh Long* and *Huu Bach Ho*, respectively.

(2) The functional formation of the Citadel has a great impact on the location of HTGHs located in its area. Most royal office buildings located in the Northeast side of Imperial City conduct the emergence of nearly two-third HTGHs in the Citadel, which were constructed around for the convenience of activities of mandarins, the original owners of those houses during Nguyen Dynasty.

(3) Even though there are four orientation choices to face for *Nha Chinh* of HTGHs in the Citadel area, 44% of them face the Southeast, the same facing orientation of the Citadel. This seemingly expresses the

faithfulness of original owners of those houses to Nguyen Kings.

(4) It is found that, the layout of HTGHs express miniature image of the Citadel because the arrangement and mission of layout elements in a HTGH and the Citadel are similar. For example, *Binh Phong* and Ngu Binh Mountain are as screen of HTGH and the Citadel, while Bright Court symbols of the Citadel and HTGH are Huong River and *Be Can*, respectively.

(5) Under the impact of urbanization, economic development and other factors, layout elements have been gradually disappeared in the modern arrangement. However, symbols of *Binh Phong* and *Be Can* have been still maintained in many HTGHs. This demonstrates that they play an important role in religious belief of Hue people. Thus, those elements should be preserved for sustainable conservation of HTGHs into contemporary use.

This paper can provide the basic information for the HTGHs' research named "Study on live conservation of Hue Traditional Garden Houses in the Citadel area-Case study of living environment and transformation". The meaning of "live conservation" is to conserve the traditional houses as cultural asset as well as secure the residents life as a living space. Thus, this paper is as basic foundation for next study, which focuses on the relation to the field of spatial organization and living conditions in HTGHs, which contributes to the task of live conservation and application of those houses into contemporary use.

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