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Towards Safe Cities & Resilient Communities

13 & 14 SEPTEMBER 2018
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**THE ARCHITECTURAL OPENINGS OF THE TRADITIONAL
COURTYARD “LATE STRAITS” ECLECTIC STYLE
SHOPHOUSES, PENANG CASE STUDIES: LOT NOS. 3, 5
AND 7 LORONG IKAN, GEORGE TOWN**

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Abstract – Openings in the traditional courtyard shophouses buildings give facades a sense of scale and directional expression. For these reasons, it is important that care and sensitivity ought to be exercised in repairing existing openings as well as in designing new ones. It is to comprehend the remaining of the maintained culture in the heritage city of George Town. The Lot Nos. 3, 5 and 7 on Lorong Ikan built in 1929 are the typical shophouses along Lorong Ikan and are categorised as the Late Straits Eclectic Style in Penang. These buildings are examples of buildings and the case studies that embrace the original remaining components of the architectural heritage of George Town. This research aims to critically investigate the original openings elements preserved in these houses. The three lots were sold and were earmarked for conversion into a boutique hotel. This paper employed qualitative research approach that obtained data from the secondary sources and observation. The findings of the research point towards highlighting shop house openings, courtyard, air well centre opening, air vents, shutters and windows as well as the most important architectural openings elements preserved in this house which is an additional to its architectural character.

Keywords – Shop house Openings, Courtyard, Air Well Center opening, Air Vents, Shutters and Windows

1 INTRODUCTION

The main objective of this study is to investigate the significance of the traditional courtyard shophouses, the building architectural openings. The architectural openings in the shophouses buildings give facades a sense of scale and directional expressions. Collectively, they also determine the scale and the directional expression of the street. Hence, they are the major elements of the shophouses urban texture. Penang has a tremendous architectural history with approximately 7,000 units of traditional courtyard shop house in George Town Heritage City. This city was built 200 years ago during different periods (Tan, 2015). In George Town Heritage City and within the general Straits Eclectic Style, several building periods can be identified (Trust, 1990). This city in the northern part of the Peninsular Malaysia has been added to the UNESCO's world heritage list in 2008 as to acknowledge its rich cultural heritage constituted of unique architectural components and cultural townscape. The traditional courtyard shophouses in George Town are one of these cultural heritages that have been well studied to understand their importance in the architectural opening components in terms of heritage values context. However, in spite of all this architectural and cultural values, recent modern shophouses in Malaysia do not share similar concern and the importance of maintaining the architectural opening values. The shophouses case studies No. 3, 5, 7 have been chosen for this research because it is the most valuable and authentic artefacts and one of the most important identities of George Town heritage city. The building, a townhouse or a dwelling house, was built in the late 19th century (GTWHI). Furthermore, the building holds many tales of the past in its architecture and design. Many rooms within the building even retain some of their original furnishing. Due the reasons, it is necessary to investigate and carry out the documentation of the architectural openings.

2 PENANG'S TRADITIONAL COURTYARD SHOPHOUSES

In Penang especially in George Town Heritage City, within the general Straits Eclectic Style, several building periods could be identified by the Penang Heritage Trust (Heritage of Malaysia Trust, 1990) which is one of the non-governmental organizations (NGO). It helps to preserve the existing heritage classified as shop house buildings into six main historical styles (Figure 1). Those are, Early "Penang" Style (1790s-1850s), Southern Chinese" Eclectic Style (1840s-1900s), Early "Straits" Eclectic Style (1890s-1910s), Late "Straits" Eclectic Style (1910s-1940s), Art Deco Style (1930s-1960s), Early Modernism Style (1950s -1970s).



Figure 1 the Six Main Eclectic Styles of Shophouses

Source: <http://penangshophouse.com.my>, (2018). <http://www.gtwhi.com.my>. Accessed on 12/1/2018

The unique architectural and decorative features in each style represent the history of George Town at different periods of time. However, Tan (2015) stated that the Late Straits Eclectic Style buildings seem to be far most eclectic creation, in which Traditional Chinese and Western architectural vocabularies sat side by side, a fusion of diverse ideas. Therefore, this study focused only on the traditional "Late Straits" eclectic style shophouses.

3 METHODOLOGY

This study adopted case studies type of qualitative research to obtain the findings. For the qualitative data collection technique, the study adopted a mixed method which were case studies, observation and secondary sources. Architectural documentation data and visualising materials were also used (Creswell, 2013). This was supported by the architectural detail studies on the Late Straits Eclectic Style Heritage Shop house. However, the paucity of literature in this present study made the researchers to concentrate more on the primary source via photo shoots. These photos were subsequently analysed in detail due to the minimal information on architectural openings in past literature of heritage building shop house. Since the paper focuses on heritage building shophouses, they are crucial to be investigated; hence, this study carried out the documentation of the architectural openings. Therefore, the researchers conducted this research on three combined shophouses buildings (3, 5, and 7) built in 1926 respectively. Besides, this study contributes to the cultural study that reflects the traditional architecture of George Town Heritage City, Penang.

4 RESULTS AND DISCUSSIONS

The main issue of this paper is to highlight the lack of awareness regarding the significance of the architectural openings of the traditional courtyard "Late Straits" eclectic style shophouses. The courtyard is identified as one of the main contributors for the conservation and documentation of the heritage components identity. Therefore, without any documentation as reference, it is difficult to trace its roots. This is due to the passing away of the old master-craftsmen and reluctance of the younger generations to carry on the role of the traditional craftsmanship. For that reason, any preservation and restoration works become an arduous task.

4.1 Traditional Courtyard Shophouses

A courtyard is a common architectural feature that has been applied for thousands of years in many parts of the world particularly in shophouses. Courtyards are often the primary meeting places for specific purposes including gardening, cooking, working, playing, sleeping (Edwards, Sibley, Hakmi & Land, 2006). The courtyards are located near the middle part of the shophouses. They are also the transitional space and the linkages between rooms. The circulation system gradually shifts from public spaces to semi-private spaces and through the stairs to the first floor, which leads to private spaces (Figure 2). It allows daylight to illuminate the internal space of the long narrow shophouses. The opening provides natural ventilation, it does not only increase the energy efficiency but contribute to an enjoyable private outdoor space for the residents (Ahmad & Rasdi, 2000).

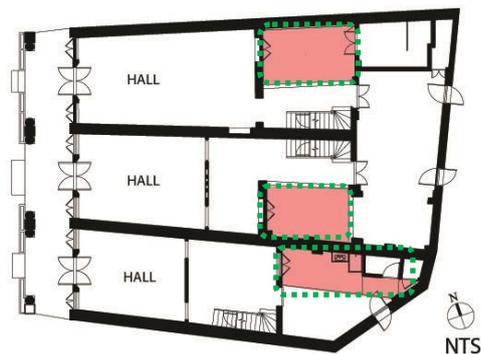


Figure 2 Location of Traditional Courtyards in Lot Nos.3, 5 and 7 Shophouses Buildings.

Source: Lot Nos. 3, 5 And 7 Lorong Ikan, George Town Measured Drawings, (2016), Adapted and Surveyed by Author.

As an open space within a cluster or urban fabric, the courtyard fulfils various functions, social, leisure and microclimate. The importance of such a space is due to its location. It is being located in central sites within the urban fabric or building and surrounded by arcades and colonnades, paved, landscaped with water bodies, various plants, shade and light, they all played important roles in the social and working life (Meir, 2000). Moreover, courtyard as a space can provide climatic as well as visual or acoustic protection. The courtyard geometry moreover of its material makeup should be considered in the design stage in order to provide the highest level of thermal comfort possible (Meir, 2000). In addition, the courtyard was developed to be climate responsive. Furthermore, the courtyard can be utilised as an appropriate place for promoting natural, healing environment. Almhafdy et.al (2013) stated that architects could place healing components of nature in courtyards within the building footprint of shophouses; along with windows at the end of corridors to allow natural light to filter through to the public and private areas. Shade, water, trees and flowers, wind, pavement, and colours could induce positive effects towards the five senses of the human body.

4.2 Air Well Central Opening

The air well central openings in traditional courtyard shop houses are originally to be fully open to the sky in order to function effectively as natural ventilation assisting in the natural evaporation of groundwater from the breathable walls and floor (Figure 3). Wooi (2015) asserted that at one-time people began to install sliding roofs with polycarbonate sheet covering. The effect is that air circulation and natural ventilation are reduced by at least 60 per cent which create more problems to the building. Such installations often damage timber or roof eave features. Besides, concerns for security have seen the introduction of timber and metal grilles at a higher level. Again this may cause damage to the original fabric and reduce the natural airflow. Thus, open air wells are highly recommended for the natural ventilation and the general wellbeing of the traditional shop house (Tan, 2015; Zwain & Bahauddin, 2017).



Figure 3 Air Well Center Openings of Lot Nos. 3, 5 and 7.
Source: Adapted by Author

4.3 Air Vents

Vents are wall openings (Figure 4), which are independent of windows or doors that provided additional ventilation. They are placed above the ground floor openings on either side of the main door and are made secure either by vertical iron bars or by decorative carved grilles. Air vents carved to depict four bats, symbolising splendour and blessed life, and are available in a variety of shapes, ranging from small circles and squares to "lucky bat" shapes. In addition, air vents are to promote better air ventilation, they include front façade air vents and air vents on partitions.



Figure 4 Simple Carved Timber Air Vents of Shophouses.
Source: Author Tan, 2015

On the front façade of traditional courtyard shophouses in Lot Nos.3, 5 and 7 shophouses buildings; there are air vents on both floors. On the ground floor, the air vents were placed above the windows, and carved to depict four bats (biān fú), which are homonymic to happiness (fú) in Chinese language pronunciation, symbolising grandeur and a blessed life (Tan, 2015). However on the first floor, there are porthole air vents which are made of precast concrete with flora decoration, can be seen from the exterior view (Figure 5).



Figure 5 Air Vents and porthole Air vents.
Source: Adapted by Author.

4.3 Shutters and Windows

Shutters and windows are the architectural openings that allow illumination and natural ventilation for the inner space. They include ground floor and first floor front façade windows. The shutters and windows on ground floor front façade in the Late Straits Eclectic style always come in pairs one on either side of the main door (Figure 6). The earliest form of ground-floor architectural openings was a plain timber frame with vertical timber bars and solid timber shutters that opened inwards. Hardwood frame complete with transom, curved fanlights, vertical bars, internal bi-fold glass window and solid timber shutter could be seen in these shophouses. The materials used are Meranti timber, solid iron bar and moulded glass.



Figure 6 Shutters and windows of of Lot Nos. 3, 5 and 7
Source: Adapted and Surveyed by Author

George Town Heritage city was under the ruling of the British and became one of the four settlements in the Straits Settlements. It was developed between the early 19th and 20th century, the shophouses that were built in the Straits Settlements began to adopt Western architectural styles with an emphasis on full-length French windows with a pair of full-length timber shutters, an arch or rectangular transom over the window opening, pilasters of classical orders and plaster renderings (Ahmed, 1994; Chen, 2005). It is to accommodate the hot and humid weather in Malaysia. Traditional shophouses built with type of architecture is called Straits Eclectic style shophouses.

Unlike the early and traditional shophouses which have a continuous row of windows (Figure 7), the Straits Eclectic style shophouses were developed with the breaking of the façade into two or three moulded openings. The tripartite arrangement of three windows on the façade reduces the actual wall space to the minimum and provides maximum ventilation. It is seen that the Western architecture style is working with the Malaysian architecture and its climate. These windows are used on the front and rear façade of the first floor of the shophouses. Such style became popular among the Peranakan China community in George Town, Penang and Melaka (Ahmed, 1994). Structurally, buildings of this style incorporate extensive use of masonry with the introduction of reinforced concrete lintels and beams, timber upper flooring and tiled roofs. On some buildings, the usage of ornaments is at a minimal but when it is applied, it is more significant towards the eye.



Figure 7 the Early Penang and Southern Chinese Eclectic Style of Windows Façade
Source: Adapted and surveyed by author

Substantially upper-floor front façade shutters and windows could be categorised into four types. The first two reflect traditional crafts-timber and glass. The other two reflect changes to modern technologies of timber, metal and glass. The first type consists of solid timber shutters or timber

louvered shutters arranged between the party wall columns and above a waist-high parapet wall. In the Early Penang and southern Chinese Eclectic styles four to eight individual shutters were usual. The second, door-height or sill-height louvered shutters (Figure 8), together with curved fanlights with either fixed louvered or glazed panels, were introduced from the period of the Early Straits Eclectic style. The number of openings depended on the width of the shophouse, two or three were usual. Raised decorative mouldings or architraves added emphasis to the openings (Tan, 2015).



Figure 8 The Early Straits Eclectic Style of Windows Façade
Source: Adapted and Surveyed by Author

The shophouses on Lorong Ikan have 9 shutters and windows on the first floor front facades, 3 shutters and windows for each shophouse (Figure 9). They were made of hard-wood frames, closed timber fanlights and timber balustrades below for security purposes. They are all door-height louvered shutters (jalousies) with solid timber lower panels (Tan, 2015). The shutters from the inside usually have either timber lattice holders or wave-shaped timber pull handles that are symmetrically fixed on the frames.



Figure 9 Three Shutters and Windows of No.3, 5 and 7 Shophouses
Source: Adapted and Surveyed by Author

The Western influence could be seen at the facade of the shophouses (Figure 10). During Late Straits Eclectic Style, door height windows shutters were introduced, replacing the full width row of windows shutters above the low walls that were used during the Southern Chinese Eclectic Style. The Early Straits and Late Straits Eclectic Style influenced by the neoclassical windows of Europe, the shutters of the shophouses are in centralised paired arrangements. The door height of the shutters increases the openings size, thus providing maximum ventilation (Tan, 2015).



Figure 10(a) - The Early Penang and Southern Chinese. Figure 10(b) - Early Straits Eclectic Style
Source: Adapted and Surveyed by Author

5 CONCLUSION

"Maintenance is the single most important conservation process. Whether the place is architectural, mechanical or botanical, prevention is better than cure." (Kerr, 1996).

Built heritage in George Town Heritage City, Penang has special values and significance in architecture related to history, aesthetics, building methods, design, material and culture. If this special significance of built heritage is replaced or ignored, then built heritage value is eroded. However, the features of architectural openings and styles of these traditional shophouses evolve over the years. They started from simple early shophouses with cheap attap roof and wooden structures. With the unique culture in Malaysia, the styles of the shophouses were influenced by the mix of the cultural background of all major races residing in George Town, Penang at that time. The traditional shophouses No.3, 5, 7 in Penang, which has been presented in this paper, were converted into a boutique hotel shophouses in the heritage area of George Town, Penang. One can find the original features and decorative elements of the shop house in this area. The buildings are an example of the architectural heritage of George Town city. Certainly, it is a marvellous example of Straits Settlements, were built and owned by a Peranakan family with the surname Wong since 1926. Although being old and dilapidated, many of the traditional shophouses "Late Straits" eclectic style have the potential to be restored and given a new lease of life. It would be great if the local authorities, architects, designers, conservators and the public would pay more attention to these old shophouses around George Town Heritage City, Penang and prevent people from demolishing the traditional shophouses components in order to build modern new offices. This study seeks to comprehend the remaining of the maintained culture in the city. For these reasons, it is important that care and sensitivity ought to be exercised in repairing existing openings as well as in designing new ones.

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