DESIGNING WITH VERANDA IN JAVANESE ARCHITECTURE

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ABSTRACT

The traditional architecture in Indonesia has been implementing local wisdom or genius loci to sustain both their tradition and built environment. In contrast, the modernity and global paradigm reduce the local paradigm. In fact, most traditional/vernacular built environment has many potential aspects, such as design of roof, building material etc. Omah Laweyanan has implemented some elements of building which refer to ecological architecture. Those are design of roof, doors and windows, and yard of house [open space] and veranda. This paper consist of discussion that ve-randa are an approach and design strategy in Javanese Architecture, which they can sustain the environment. This paper will focus on omah Laweyanan in Surakarta. According to field study, it shows that veranda in omah Laweyanan is an alternative that attempts to minimize the impact of global warming and climate change, which can be developed through the implementation in architecture design.

Keywords: *design of roof, doors and windows, veranda, omah Laweyanan*

ABSTRAK

Arsitektur tradisional di Indonesia telah menerapkan kearifan lokal atau genius loci *untuk mempertahankan lingkungan tradisi dan binaan mereka. Sebaliknya, modernitas dan paradigma global mengurangi paradigma lokal. Pada kenyataannya, lingkungan binaan yang paling tradisional/vernakular memiliki banyak aspek potensial, seperti desain atap, bahan bangunan, dll. Omah Laweyanan telah menerapkan beberapa elemen bangunan yang mengacu pada arsitektur ekologis. Mereka adalah desain atap, pintu, dan jendela, dan halaman rumah [ruang terbuka] dan beranda. Penelitian ini terdiri dari diskusi dimana beranda merupakan sebuah pendekatan dan strategi desain dalam Arsitektur Jawa, yang dapat mempertahankan lingkungan. Penelitian ini akan fokus pada omah Laweyanan di Surakarta. Studi lapangan menunjukkan bahwa beranda di omah Laweyanan merupakan alternatif yang berupaya untuk meminimalkan dampak pemanasan global dan perubahan iklim, yang dapat dikembangkan melalui penerapan dalam desain arsitektur.*

Kata Kunci: *desain atap, pintu, dan jendela, beranda, omah Laweyanan*

INTRODUCTION

Javanese Architecture has developed appropriately in cultural change and their needs change, particularly related to community factors. It is developed in Surakarta, where there is an area that has houses and adapting Java Architecture refers to the elements of European Architecture. The district is known as Laweyan, a district that culturally includes three areas (Bumi, Sondakan, and Laweyan). The administration is used to refer to a village and sub-district at the same time (see Figure 1).

There are some houses identified as Javanese Houses. That house consist of Javanese Architecture spatial system e.g. *pendhapa, dalem, senthong, gandok*. In contrast, those houses have a European Architecture Style (Art Deco, Gothic, and so on), as in Figure 2. It is almost certain that these houses have a spatial system called *pendhapa* that in the context of other architectures is a veranda (porch). The veranda is technically able to reduce the heat so as to provide thermal comfort for the occupants.

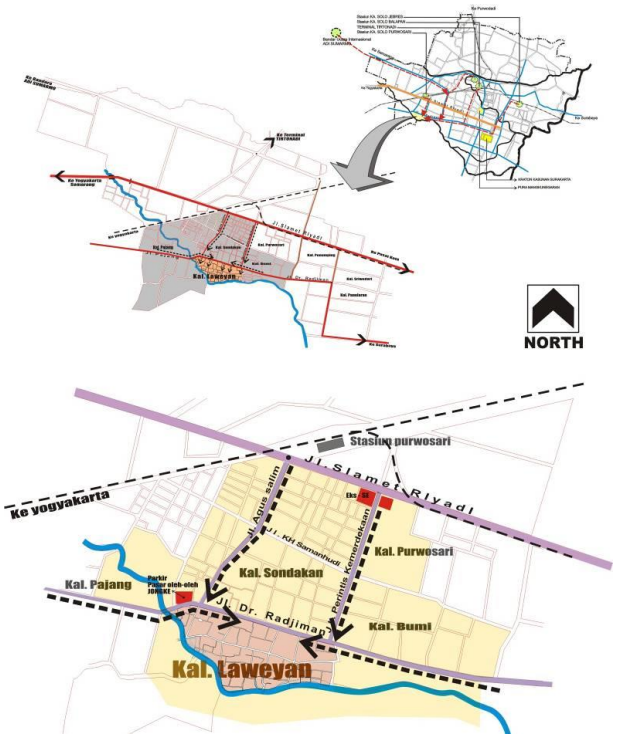


Figure 1. Location of Laweyan District
Source: field survey, 2011

THEORY / RESEARCH METHODS

This paper is based on field research to investigate the old houses that have specific architectural appearance (style). The objects are according to *omah* (house) Lawe-

yan in contemporary context, then be organized a field research, further examined in more detail. Research sample has chosen by purposive method as representing three sub areas (Bumi, Laweyan, and Sondakan) (see Figure 2). *Omah* (house) Laweyan as sample has investigated by using descriptive qualitative method. This attempt associated with the architectural sustainable context. The data are spatial system, building orienta-tion, roof elements, materials and wall elements.

Bumi Area




Laweyan Area



Sondakan Area

Figure 2. Typology of *Omah* Laweyan.
Source: field survey, 2011

RESULTS AND DISCUSSION

Laweyan is an area in Surakarta that has a long history, even before the town of Surakarta established. The historical record makes Laweyan have physical evidence (legacy) in architecture that can be seen to this day.

The history of Laweyan is inseparable from the history of Great Mataram, when put up period (17th century) as well as when standing in Kartasura (1730-1743), and moved to the village in the last moment Sala (Surakarta Hadiningrat-1745). In the historical context of Javanese Mataram (Kasunanan Keraton Surakarta) Laweyan was well known as a province with special status (*perdikan* area), the meaning is Laweyan have opportunities to grow without being bound by Sunan, or in other words have specific authority to develop its territory. Position as the implications on the physical footprint of the house is located in Laweyan. Exist in the built house, Laweyan have different appearance (typical) compared to other houses in other villages.

The form of Laweyan house can be grouped into three typologies, namely: house that has been existed as Javanese Architecture, house that has been existed between the architecture hybrid Javanese Architecture and European Architecture, and the house that has been existed as Modern Architecture building. Java Architecture house is still applied in several buildings, with not too maintained condition. The houses are a feature of the home that is inherent Laweyan mixture Java Architecture and European Architecture. In general, the condition of the houses are well maintained, and still occupied or used for specific functions. This house typology is further classified into Architecture of Laweyan/*omah* Laweyan (see Figure 3 and 4).

This paper will discuss the houses that represent the three areas, Bumi, Laweyan and Sondakan.

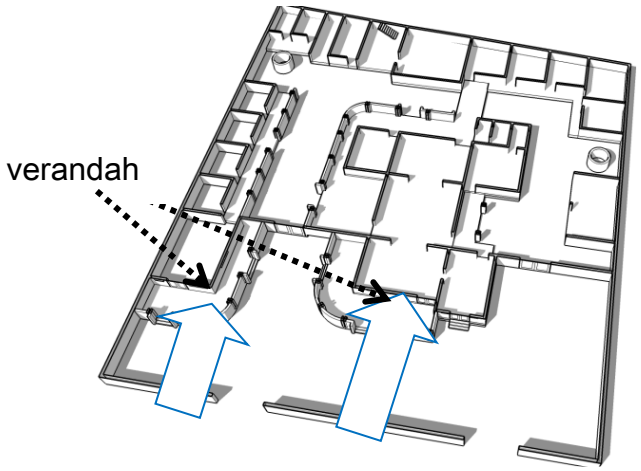


Figure 3. Plan of Typology of *Omah* Laweyan.
Source: field survey, 2011

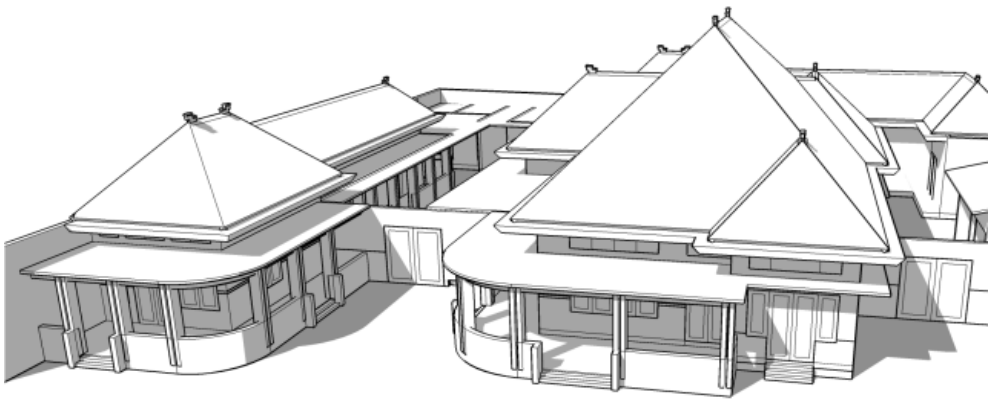


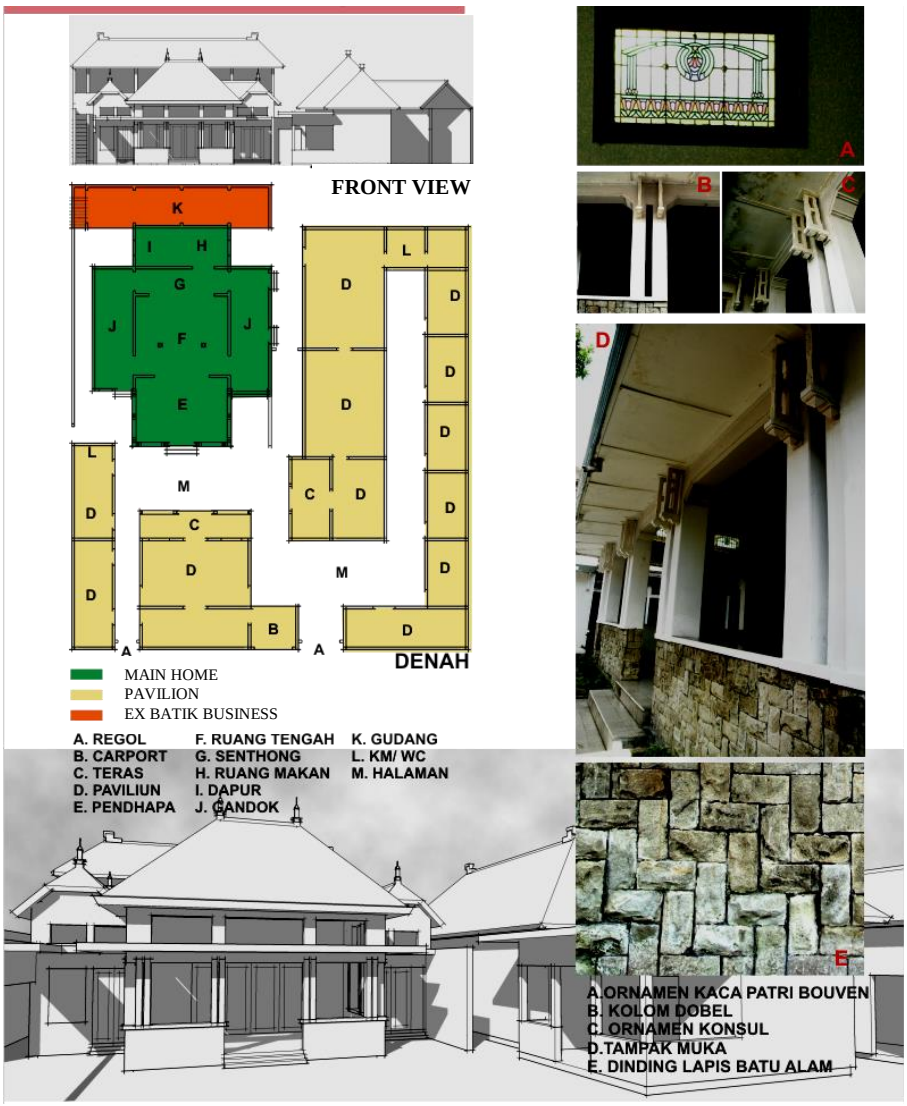
Figure 4. Axonometry of Typology of *Omah* Laweyan.
Source: field survey, 2011

Case 1.
In the first case (see Figure 5): the house is located in the Bumi district (kelurahan), where it is still used as a residence and batik activities are not carried out. The front and side of house act as semi-public domain, it is called as veranda. In veranda, inhabitants do some semi public activities. That is transition area which can reduce thermal. This section made possible reduction of heat, so the temperature in the house is comfort. Meanwhile the shape and size of the roof is quite a relief and allow large residential shelter system that causes indoor air temperature (microclimate) more comfort.

Case 2.
The case of a second house (see Figure 6) is located in the Laweyan district (kelurahan), where the condition is well populated. This house which located faces south is situated on the rear of the other house. Concerning this spatial usage, the inhabitants usually do their habitual activities such as reading. In science building context, this house has the ability to make the temperature inside the house (microclimate) quite comfortable.

Case 3.
Compared to the former *omah* cases, which consists of multi pavilion, this omah has a quite simple house. In the third case (see Figure 7), the condition is no different: it has monetary affairs and building components that can condition the thermal factors in the home remains comfortable. Using some parts of their house for producing batik, they employed a couple of dozen workers until the factory closed down in the late 1970s due to the coming of printing technique batik.

Figure 5. *Omah* (house) Laweyan as Case 1
Source: field survey, 2011



LEFT:

A. REGOL
B. CARPORT
C. TERRACE
D. PAVILION
E. HALL
F. CENTRAL ROOM
G. SENTHONG
H. DINING ROOM
I. KITCHEN
J. GANDOK
K. WAREHOUSE
L. TOILET
M. YARD

RIGHT:

A. STAINED GLASS ORNAMENTS ON BOUVEN
B. DOUBLE COLUMNS
C. KONSUL ORNAMENT
D. FRONT VIEW
E. WALL COATED BY NATURAL STONE

Figure 6. *Omah* (house) Laweyan as Case 2
Source: field survey, 2011

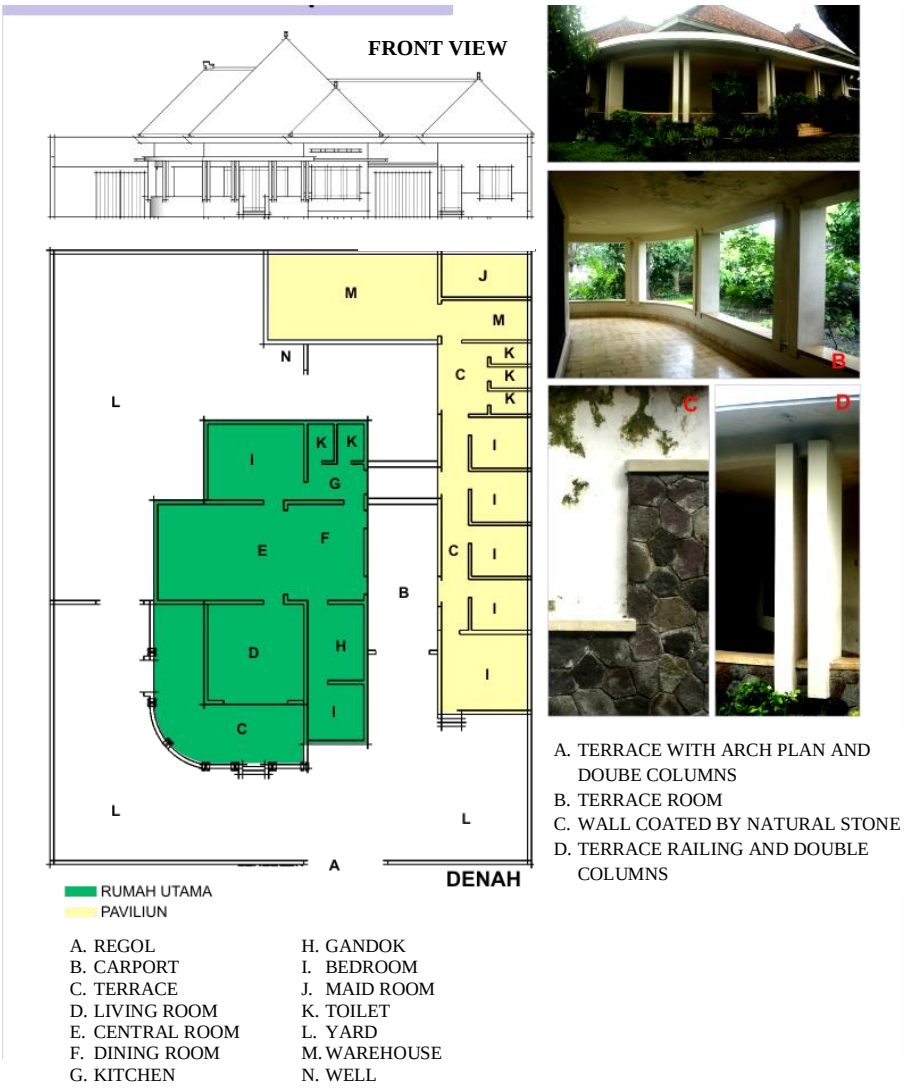


Figure 7. *Omah* (house) Laweyan as Case 3
Source: field survey, 2011

CONCLUSIONS

Most of *omah* Laweyan have this part called veranda (the porch of the house), which be used to serves the guests, or other semi-public activities. Omah Laweyan also technically capable of making the house thermally comfortable, so it can be a cause that *omah* Laweyan architecture is capable of adapting to internal factors (the changing needs of occupants) and external factors (climate change).

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