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Exploring Translocation of *Omah* Java in Pawon Garden, Bogor

A Case Study of Ex-situ Architectural Conservation

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Abstract – Pawon Garden is a building complex located in Parung, Bogor, consisting of several translocated Javanese vernacular (*Omah*) buildings. This study aims to determine the process of translocation of Javanese *Omah* in Pawon Garden Parung in a narrative manner, resulting in knowledge about the translocation of Javanese vernacular buildings as an effort of ex-situ conservation in architectural terms. This study uses a qualitative descriptive approach to show the translocation process of Javanese vernacular buildings, starting from technical specifications, elements, and materials. The building translocation process discussed in this study is divided into three stages: the dismantling process, the translocation process, and the reconstruction process. Several changes to the building occur as a form of adjustment of the building to its new environment and functions. The changes reduce the authenticity of the building. However, most of the elements and structures in the translocated Javanese *Omah* are still the original components of the original building.

Keywords: *adaptive re-use, ex-situ conservation, Javanese Omah, translocation*

I. INTRODUCTION

The Pawon Garden Parung is a complex whose buildings are Javanese vernacular (Javanese *Omah*) translocated buildings. The buildings were translocated in 2014 by the owner, dr. Iskandar consists of nine Javanese *Omahs* located on a 9,214.48 m² site. The translocated buildings are Javanese *Omahs* from around Kudus, Jepara, and Purwodadi. According to the owner, the translocated Javanese *Omah* is a former residential building that has more than 100 years of age which the original owner abandoned due to the poor condition of the building and the demands of the times. The owner who has an interest in Javanese architecture then took the initiative to buy and translocate the buildings and make it a collection.

This effort itself can be categorized as ex-situ architectural conservation (Yusran, et al., 2019; Yusran, et al., 2021). The Burra Charter states that conservation is a maintenance activity that is adapted to its original condition (ICOMOS Australia, 1987; Rachman, 2012). The focus of conservation is history, present and future, taking into account historical evidence, current needs and

sustainability for the future (Orbasli, 2008). Conservation activities are significant in the future to minimize damage and increase the cultural and economic value of historical heritage (Lucchi, 2018).

Ex-situ conservation in architecture is a conservation method that conserves a building outside its original environment (Yusran, 2019). Translocation defines the displacement of Javanese vernacular buildings as an act or process of moving facilities from their place of origin to other areas (Yusran, 2019). In the context of ex-situ conservation, this displacement was carried out because at the place of origin, the vernacular building was no longer feasible and adequate for the sustainability of the building from the occupant's perspective and in terms of its maintenance.

In its new place, the translocated building must accommodate its new function. An adaptive approach is often used to modernize the old building (Hmood, 2019; Arfa, et al., 2022). Adaptive re-use is done by adapting new functions into the building, minimizing transformation, and maximizing existing assets in the building (Robiglio, 2016). To accommodate the new role, the renewal and strengthening of the structure in the old building are necessary to make it safe to use (Aigwi, et al., 2019).

Javanese *Omah*, made with elements that are easy to assemble and disassemble, makes this building often translocated. Elements of Javanese vernacular buildings can be divided into 3 (three) parts, namely the head (*brunjung* or roof and roof cover/tile), the body (*soko guru* or pillar), and the legs (*umpak* or foundation) (Sudarwanto & Murtomo, 2013). Architecture in the Nusantara dominantly displays its beauty through the exterior. Visually, the shape of the Nusantara house, including the Javanese *Omah*, strongly emphasizes the roof as the dominant character (Prijotomo, 2019). In general, Javanese *Omah* can be divided into five types based on the type of roof: *Joglo*-shaped house, *Limasan*-shaped house, *Kampung*-shaped house, *Tajug* or *Tarub*-shaped house, and *Panggang-pe*-shaped house (Roesmanto, 2002; Ismunandar, 2003; Idham, 2018; Idham, 2021).

At the Pawon Garden, there are twelve translocated buildings. There are four Javanese *Omahs* with *Joglo* roof type, one Javanese *Omah* with *limasan* variety, four Javanese *Omahs* with *kampung* type, and three buildings in the form of small *saung*. The objects researched in this study were nine translocated wooden Javanese *Omah* (not including the *saung*). In the process, the translocated Javanese *Omah* changed function, resulting in several changes and adjustments to its visual and structural elements. From a conservation perspective, this approach can be categorized as adaptive re-use. Adaptive re-use is modifying or changing a building to replace its function with a new one by leaving its old function (Saputra & Purwantiasning, 2013). Some of the Javanese *Omah,* which are no longer feasible, can be converted into a new function to suit contemporary needs. Therefore, seeing indications of the ex-situ conservation approach of Javanese *Omah* in Pawon Garden, this study tries to explore this phenomenon which aims to examine the process of translocation of buildings that occurred in the nine Javanese *Omah* there. Specifically, this study discusses the changes in the translocated building elements and materials and their adaptation to the new functions.

II. METHODOLOGY

This research is located at Pawon Garden on Jalan Raya Parung, RT.02/RW.01, Pemagarsari Village, Parung District, Bogor, West Java (see Fig. 1). In this study, Pawon Garden was used as the research location by taking nine translocated Javanese vernacular buildings as the focus. This research used a qualitative study approach. The data were taken qualitatively by interviews and direct observation of the phenomena in the field. By observation, capturing existing phenomena, and interviewing sources, this research was structured descriptively using direct experience during observation, assisted by field notes, some photographic documentation, and several interviews to get a holistic picture (Creswell, 2014). This research also uses a case study approach. Case study research is a qualitative method that can stand alone (Denzin & Lincoln, 2009). It is helpful for gaining an in-depth appreciation of an interesting problem, event or phenomenon in a natural, real-life context (Crowe, et al., 2011). The results of the data from the qualitative research were then analyzed and explained descriptively to explain the process of translocation of Javanese *Omah* at Pawon Garden in Parung Bogor.

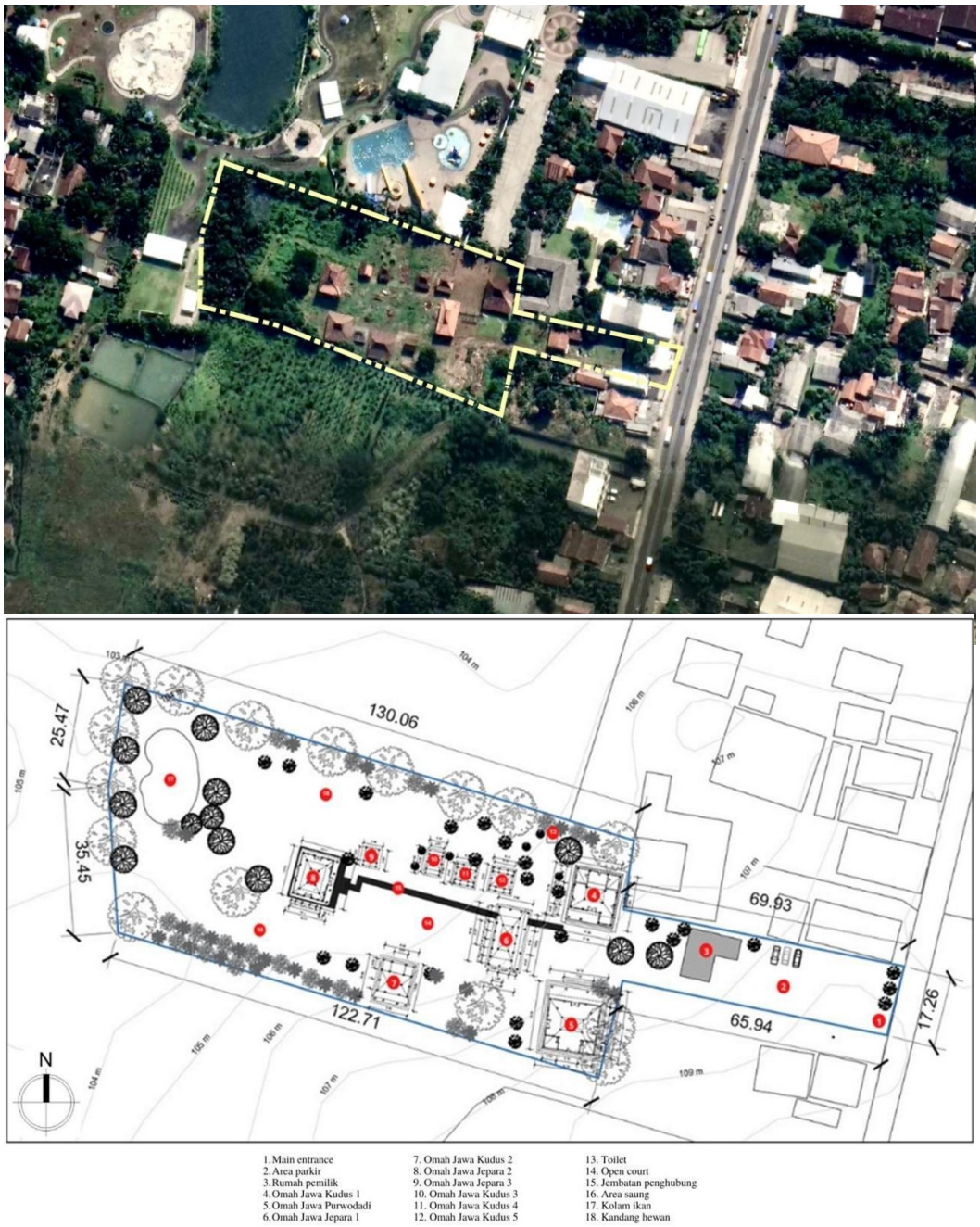

Fig. 1. Pawon Garden's Location in Parung, Bogor Regency (Top); Pawon Garden's Map (Below)
Source: *Google Earth* and author's redraw (2022)

III. RESULTS AND DISCUSSION

Pawon garden is a cluster of Javanese *Omah* collections due to the translocation of dr. Iskandar. This Javanese *Omah* is filled with collectible antiques. The nine Javanese houses in Pawon Garden were translocated from Kudus, Purwodadi, and Jepara. Each Javanese *Omah* also has its form and uniqueness according to the origin of the place where it is located. This translocated house still retains its original shape, but many changes occur due to adjustments during the translocation process. Pawon Garden initially only functioned as a place to store collectibles and a place to gather and rest for the owner's family. However, dr. Iskandar and his colleagues then want to develop Pawon Garden into a recreational business such as boutique restaurants-cafes and galleries to showcase their collections to the public in the future.

A. History and Development of Pawon Garden

All Javanese *Omahs* in Pawon Garden Parung were translocated in 2014 simultaneously. However, the Javanese *Omah* was obtained or purchased at different times. Several buildings were acquired between 2002 and 2003, and the oldest was purchased in 1998. However, after being purchased, Javanese *Omah* was not translocated immediately until 2014.

The first Javanese *Omah* purchased was *Omah* Jepara 2, then over time, it was followed by *Omah* Kudus 1, *Omah* Purwodadi, and *Omah* Jepara 1. The owner got this Javanese *Omah* in several ways. Some *Omahs* were obtained because of helping Javanese house owners who were in debt. There are also *Omahs* that were purchased because the original owner was unable to maintain the house, and some were obtained from artisans who did sell Javanese *Omah*. After residents heard that the owner often bought old Javanese *Omahs*, many residents began to offer and sell their Javanese *Omahs*. In addition to Javanese *Omah*, the owner also buys parts of the building such as doors or *gebyok*, panels, roof tiles, ceramic tiles, windows and stained glass, as well as other Javanese *Omah* accessories.

In the re-establishment of Javanese *Omah* in its new location, the owner was assisted by two supervisors and a broker who had been working together since Pawon Garden Parung began planning. When the Javanese *Omah* is about to be translocated, the broker, along with the head of a handyman, visits the location where the building is located and assesses whether the building is still feasible and usable. This is intended to check whether the structure is still strong and can be re-used without significant changes. The process of demolition, translocation, and reconstruction of Javanese *Omah* was carried out by the local skilled craftsmen, supervised and directly controlled by the head of the handyman.

In addition to the nine Javanese *Omahs* (see Fig. 2), there are several other additional buildings, such as the addition of two separate modern bathrooms made of brick at both ends of the site. Over time, the owner added three small *saung* on the west side of the site. This *saung* is made of bamboo and wood. There is also a cage for livestock and a dog cage. In 2022, staff dormitories will also be built to house the staff who previously lived in one of the translocated *Omah* Kudus. The staff dormitories are modern buildings made of bricks but still use Javanese building accents such as Javanese carvings and stained glass with floral motifs.

Fig. 2. Translocated Javanese *Omah* in Parung Garden
Source: Authors (2022)

B. Translocation process of Javanese Omah

In 2014, Javanese *Omah* at Pawon Garden Parung was simultaneously translocated. In the process, in general, the translocation of Javanese *Omah* in Pawon Garden Parung was carried out in 3 stages. The first stage was dismantled *Omah* at the original location, followed by the translocation process, and finally, the reconstruction process in a new place.

1) Dismantling Process

The first process carried out in the Javanese *Omah* translocation is to dismantle the building component which will be translocated. Javanese *Omah* at its original location was disassembled, inspected, and selected elements that were still fit for transportation. Eleven *Omah* buildings were dismantled and moved. The dismantling process is carried out within one to two days, carried out by several builders, and supervised by the head of the builders and brokers. The dismantling process is

carried out without shop drawings, but measurements are still carried out as appropriate for construction. The dismantling process is carried out from the outermost top to the bottom. The roof tiles are dismantled and separated first. Then proceed with dismantling the wooden panels of the building envelope and the demolition of the building-forming framework by removing the joints that connect the existing building components.

According to the owner, most of the Javanese *Omah* that was translocated was in bad condition due to their age as it was an old building that had been a dwelling of households for long generations that had existed for tens or even hundreds of years of preservation. The Javanese *Omah* also underwent several changes in form and function due to the times and the needs of the original owner who lived in the house. Some of these Javanese *Omahs* also experienced changes in building components caused by weathering. However, due to economic conditions, it is not uncommon for damaged building components to be replaced with standard components. For example, if there are damaged wooden wall panels, wooden doors or window panels that are blocked off will be used instead of walls. However, this could be regarded as reducing the value of the authenticity and beauty of this building. Therefore, the owner fixes the shape of the Javanese *Omah* component that will be translocated to match the shape and use the component as it should. This is done to improve and increase the visual appearance of this building. Javanese *Omah,* which has modified its shape or added a new room with modern materials, is also returned to its sleeping form when rebuilt in a new place.

At the time of dismantling, the components of the building are sorted, and their condition is observed. Elements that are still in good condition are separated from those that are not. Some components, such as doors, wood panels, and roof trusses, are mostly in poor condition. Some are already fragile, broken, and cannot be re-used. Components that are no longer feasible will be left out. Other components that are in poor condition but are still usable will be repaired and translocated. The elements of the building, which are mostly in good condition, are *saka guru* and *tumpangsari*. This structural element is considered the most important and irreplaceable of each building. *Saka* and some ornaments are also still in proper condition and become the characteristics of each building. Most of the building cladding panels were abandoned because they were considered replaced by new wood materials.

After the building is dismantled, some building components, such as pillars and panels, are marked or coded (see Fig. 3). According to the owner, the builders will use all means so that the building components are not mixed and swapped. The various ways of marking are done by using letters, numbers, and combinations of letters and numbers such as A-1, B-2, and C-3. Some components are color coded. The marking is done using paint, markers, and scraping the components with sharp objects. The owner stated that when the building component was installed, it would look bad because of the code. When using paint, the marking can still be removed. However, markings made by scraping will be difficult to remove. Other building components, such as roof tiles and roof trusses, are not coded or marked because they are similar and can be used in an adapted way without changing the shape and essence of the building.

Fig. 3. Examples of How the Handyman Coded the Reconstructed Panel
Source: Authors (2022)

2) Translocation Process

The dismantled building components are loaded onto trucks for transport to their destination. The relocation of 11 Javanese *Omah* in Pawon Garden requires approximately 8 (eight) pickup trucks to transport all the dismantled components. All building components were mixed and transported simultaneously in one go to their new site at Pawon Garden Parung. At the same time, a new building site is being prepared. The initial preparations carried out were tilling the soil and trimming the bushes and wild plants where the building would stand. To save time, adjustments are only made to the soil of the footprint on the part to be built. Wild plants other than on the land that was built were then trimmed after all Javanese *Omah* had been reconstructed, and intensive site arrangement was carried out in 2017.

The existing condition of the site has a land contour equivalent to the road at the front of the site (east side) and a relatively gentle descent of the ground to the rear (west side) of the site. Not far from the site, there is Lake Setu Lebak Wangi. This lake is about 10 meters from the rear boundary of the site. The existence of this lake causes a puddle of water at the back of the site, which has a lower soil level. The owner then took advantage of the reservoir to make an artificial pond. Existing puddles are dug up and beautified to make the site look like a lake. The soil dredged to create an artificial lake is used for leveling in some parts of the site, thereby reducing the cost of buying backfill.

Markers and stands or foundations for the Javanese *Omah* location will also be prepared. The marker is made according to the size of the *Omah* that has been calculated at the place of origin. The stands or foundations of Javanese *Omah* at Pawon Garden Parung have various forms according to the needs and conditions of the soil. The Javanese *Omahs* at Pawon Garden Parung are arranged linearly and cluster by adjusting the height of each *Omah*. According to the owner, the arrangement is intended to resemble the arrangement of the Javanese Palace Complex while simultaneously adapting the arrangement of traditional Chinese houses commonly found in Indonesia.

3) Reconstruction Process

Once the truck containing the translocated Javanese *Omah* components arrived in Parung, the cargo was immediately unloaded, and the reconstruction began. Components are separated based on the type of elements and their materials. For each component, condition and feasibility checks are also carried out. Some of the components are damaged in the transportation process. Many roof tiles and roof ornaments were cracked and even broken, and the columns and wooden beams were broken due to porous and shocks. It is not surprising that of the 11 translocated *Omahs*, only nine *Omahs* were able to be established.

Most of the elements and structures in the translocated Javanese *Omah* are still the original components of the original building. The reconstruction process of Javanese *Omah* is trying to maintain the components as a whole, but in some parts of the building which are considered unfit for re-use, they will be replaced with other parts of *Omah* (see Fig. 4). Therefore, in some buildings, the reconstruction does not come from one building alone but combines two or even three buildings. This is done to maintain the integrity of the form and the authenticity of the translocated *Omah* so that the impression or "aura" of the building with Javanese architecture can still be felt.

Fig. 4. The Third Reconstruction Process of *Omah* Kudus 2 in 2022
Source: Authors (2022)

The reconstruction process began in 2014 and lasted for about a year. However, in 2017, two Javanese *Omahs* were reconstructed, namely *Omah* Purwodadi and *Omah* Kudus 3. The Javanese

Omahs were dismantled, reassembled, and retrofitted due to poor initial construction and slanted installation. The owner, assisted by the head of the craftsman (foreman), plans how the *Omah* building can stand firm—starting from planning the foundation, strengthening the building so that it does not move due to unstable soil, and preserving and preventing termites. The wood components that have been translocated are also treated with termite repellent. Periodically, the building will be given another termite repellent every three months.

Generally, the reconstruction process carried out has the same stages in all the buildings. First, the preparation of the foundation or building holder is carried out according to the measurements of the original building. Next, the building's columns or *saka* are arranged along with their beams and then the building envelope panels are installed. After that, the roof structure was built and covered with tiles (see Fig. 5). The floor is installed after all the structural components are built. Furniture is put in after the building is finished. In some buildings, electrical circuits were installed in 2017.

4) Adaptive Re-Use

The translocation process of the building carried out by the owner has made the translocated Javanese *Omah* experience several changes. These changes occur as a form of adjustment of the building to its new environment and functions. In general, the changes between one building and another have similarities. The building elements that have undergone the most changes are the foundation and floor elements (see Fig. 6). All buildings have their foundations renewed to match the contours of the land in their new location and strengthen the building.

Fig. 5. Several Preserved Elements of *Omah*
Source: Authors (2022)

Fig. 6. Several Adjustments to Beautify *Omah*'s Appearance
Source: Authors (2022)

The addition of ceramic floors in each building is carried out to increase its residents' comfort and beautify the building's appearance. However, it is considered a way to reduce the authenticity of the building. The building that experienced the most significant changes was *Omah* Jepara 1. The building that had the most negligible changes was *Omah* Jepara 3. *Omah* Kudus 3, 4, and 5 had a few changes that tended to be similar: the complete replacement of wooden floor slabs and pedestal foundations (*umpak*) made of wood and stone into steel floor plates and a framework made of steel and cast concrete. The part of all the pristine buildings is the pillar of the *saka guru*. The entire building still has the *saka guru* intact and has not given any reinforcement.

The *saka*/other pillars in the building are still original. Still, due to the loose joints and connections, some Javanese *Omahs* have been reinforced using the help of nails or nuts and bolts, although it is considered to reduce the authenticity of the building. *Omah* Jepara 1 and Jepara 2 also experienced building elevations to adjust the tread's contour, which decreased towards the back (west side). This is done to give the impression of grandeur to the building. In addition to the visual changes, there are also changes in the function of each of these Javanese *Omahs*.

Broadly speaking, the causes of this change are identified into three factors: the safety factor and structural strengthening, the new function fulfillment factor, and the aesthetic factor. General changes that occur in translocated houses in Pawon Garden to overcome the safety factor of the building are the addition of a combination foundation and river stone foundation. The addition of the foundation helps adjust the soil's contours and strengthen the translocated building's foothold. The foundation is then connected and connected to the *saka* of each building. Another adjustment is the use of bolts, nuts, and nails to strengthen the construction, even though the reinforcement is seen as reducing the authenticity of the building.

The next factor is the change caused by the fulfillment of the new function. Initially, the translocated *Omah* served as the residence of the previous owner. As much as possible by the new owner, the original condition of the translocated building is preserved. However, to accommodate the new function, changes are needed to increase the comfort of the space. These changes include the replacement of floor materials, the addition of lighting and electronics, to changes in the structure to support other functions. Currently, temporarily, this *Omah* is used to accommodate the owner's collection of antiques. In the future, the owner wants to turn this place into a place of recreation such as boutique restaurants-cafes and galleries.

Aesthetic factors change the translocated buildings due to the need to beautify the visual appearance of the building. These changes are in the form of building elevations as well as adding or reducing building elements. The changes can be seen in the use of ornaments, finishing of concrete column heights, using materials that are following the original building, adding *gebyok*, and much more. This aesthetic adjustment gives the building a significantly more refreshed look. Although it has undergone several changes, the materials and elements used are still similar and are sought to be in harmony with the original building.

IV. CONCLUSION

From the results of the analysis of this study, in exploring the translocation process of Javanese vernacular buildings, starting from the technical specifications, elements, and materials and distinguishing whether the building elements underwent changes, replacement, or maintenance, it was identified that there were various kinds of adjustments or changes made by the owner so that the translocated Javanese *Omah* can result in an optimally maintained image of a standard house in Java. In the dismantling and translocation phase, there was a process that resulted in several building components being damaged; therefore, in the reconstruction process, there was a reduction in the number of buildings from 11 houses to 9 houses.

In addition, the factors causing this change were identified as safety factors and structural reinforcement, factors for fulfilling new functions, and aesthetic factors. Building elements from different Javanese *Omahs* are used to replace other damaged building elements to maintain the integrity of the building. Likewise, the reinforcement is carried out inside and on the building site. Changes and adjustments to the building in its new place are the owner's efforts to maintain the authenticity of Javanese *Omah*. However, in the technical implementation, several approaches are considered to reduce the authenticity of the building. Regardless of changes, adjustments, and other

obstacles, efforts to maintain the physicality and integrity of the translocated buildings can still be categorized as one of the conservation efforts, in this case, the ex-situ conservation efforts.

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