IDENTIFICATION OF SPACIAL PATTERN IN PRODUCTIVE HOUSE OF POTTERY CRAFTSMEN

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ABSTRACT

The research goals were to identify a spacial pattern in craftsmen house and to see its relevance to the social-cultural life of the craftsmen. The existence of domestic and economic activity in craftsmen house creates a spacial pattern with particular characteristics. Data were collected through direct observation, interviews, and visual documentation to record productive house, settlement condition, and sequences of pottery production. The in-depth interview focused on the use of time, space, and house modification in craftsmen house. House in the craftsmen settlement was growing gradually by adjusting to the inhabitant's needs. This research was included in qualitative research that described observation results and then analyzed spacial pattern formed in craftsmen house. Research results show that in this settlement beside the mixed, balanced, and separated type of productive house, there is also pottery collectors house type. The changes in the productive house are related to housing adaptation or house adjustment to accommodate production process. The settlement orientation is along the streets, but the existence of open space in the form of pottery kiln and hay storage become the main orientation for productive spaces inside the craftsmen house. Pottery kiln and hay storage have become open cultural space that characterizes the pottery craftsmen settlement.

Keywords: *spacial pattern, productive house, pottery craftsmen, settlement*

INTRODUCTION

Dukuh Krajan, Desa Pagelaran is one of pottery producers in Malang, the community skill has been passed down through generation. The dominance of traditional pottery craftsmen in these settlements creates unique characteristics of the settlements. In this pottery craftsmen settlement, the craftsmen house is not only function as a home but also as a place for the domestic industry which is better known as Home Based Enterprises (HBEs).

It is often said that human settlements in developing regions continue to preserve the characteristics of the rural village, and such a concept applies to *kampung*. *Kampung* houses are not built as completed house in the beginning stage. They are later enlarged according to the needs of the inhabitants step by step (Funo, Yamamoto, & Silas, 2002). Similar conditions also happen in this settlement due to the workspace needs that have not been accommodated before. Therefore, there are several adjustments done by the craftsmen in their house. In this case, space is the main issue and the one which requires further exploration.

Silas (2000) states that HBEs will increase family, social, and economic condition. Then, in the end, it will also improve the environmental quality itself. Location of pottery craftsmen settlement that will be discussed in this paper is in Dukuh Krajan, Malang with approximately 24.583 m^2 of the area that consists of 67 houses. It is located near the highway in the direction toward Bantur- Malang.

The highway is already accessible by public and private transportation either on motorcycles or cars. The boundary of the area that will be discussed can be seen in Figure 1.

Figure 1 Location of Pottery Craftsmen Settlement
(Source: Google Earth)

'Space in itself may be primordially given, but the organization and meaning of space are a product of social translation, transformation, and experience' (Samarasinghe, 1997). It means spaces are socially constructed through the activities which take place in there. Economic and domestic activities occurred in home based on enterprise create different spacial pattern than the regular house. Moreover professional similarity as pottery craftsmen will add special characteristics inside of it.

This research will attempt to explain the complex issues of space usage in constrained domestic and working circumstances and search the link between space usage and social-economic condition of the pottery craftsmen. This research is to add insights about HBEs architectural concepts as a process related to the life of the inhabitants. While for the inhabitants, the research results are expected to help them about the problems of residential space to support HBEs sustainability.

METHODS

According to Spradley (2007), the samples are qualitative research in the form of social situation which is composed of three elements. There are the place, actor, and activity that interact synergistically. In this site planning of pottery craftsmen settlement, these three samples can be explained as following. First, place refers to settlements area that is used to perform the activity of pottery production. Second, actors are inhabitants of settlements who are living as craftsmen and pottery collectors. Last, activity is related to the activities including the behavior, and work sequences which are done by the inhabitants.

Data collecting in this research are conducted through the in-depth interview, visual documentation and direct observation with the pottery craftsmen. The in-depth interview is needed to record the inhabitants' interpretation of their circumstances and strategies to cope with conflicting demands on domestic and productive space. A list of several questions is prepared to make sure the interviews is flexible and focused. The interview questions are mainly focused on several issues. First,

it is about the use of time. Some of the factors that will be explored are the allocation of time in productive and domestic activities and seasonal activities done by the craftsman. Second, it is related to use of the place. This will focus on methods of dividing space, space conflict in productive and domestic space, andshared space inside the settlement. Last, it is house Modification. This is about changes in craftsmen house caused by production activities. The Interviewer would encourage the respondents to speak at great length to explore the broader perspective of each respondent regarding their circumstances. Inhabitants' testimony approaches offer great opportunities to complement physical and visual data.

Visual documentation including a series of photographs describes settlement condition and sequences in pottery production. Then, room organization for each type of productive house is recorded in the form of layout plan that will be analyzed to know the spacial pattern. Moreover, photographs of open spaces, streets and another part of the settlement are also taken, especially where production activity presents. The aim is to create a detailed record of key spaces and activities pattern occurred inside the craftsmen house and settlement. Images provided are useful to interpret plans and recall places and activities.

Direct observation is needed to record things that cannot be documented directly using layout plans and photographs. Because many of the activities, boundaries between the craftsmen, and also their socio-economic condition cannot be seen without much involvement with the inhabitants. Therefore to complement the main research data, the researchercan live near the settlement and take notes from the direct observation. By living near the settlement, the researcher can experience life within the settlement and carry out a series of more detail case studies and activity cycle. After data collecting through observation, interview, and questionnaires are done, the results of data collection are selected and then analyzed that will lead to research results.

RESULTS AND DISCUSSIONS

The settlement orientation in Dukuh Krajan is in the form of along the streets with 4 meters width. The distance between houses in the settlements is less than 1-meter causing natural lighting and ventilation not to work optimally for each house, as seen in Figure 2.

Figure 2 Along the Streets Orientation

The pottery production process from processing raw material, making and drying potteryis done in each craftsman house, andfor the firing process is done communally in pottery kiln area.It is because of the lack of space inside the house. Some part of the settlement street is being used as drying area or raw material storage.

Widayati (2002) explains that houses are part of the settlement. A cluster of houses creates settlement with a certain pattern. Some of the settlement are grouped based on profession similarity. Profession similarity is also the main thing that forms Dukuh Krajan as a pottery craftsmen settlement with a specific character. Profession similarity in this settlement strengthens the craftsmen social bond. Social relationships between the craftsmen are pretty high. It can be seen from the use of shared space in the form of open space as pottery kiln and hay storage. One pottery kiln is usually owned by one craftsman, but the others can rent the kiln interchangeably. Open space is inside the settlement in the form of pottery kiln and hay storage, as seen in Figure 3. Inside Dukuh Krajan, there are seven pottery kilns where each is used interchangeably by 9-10 craftsmen.

Figure 3 Pottery Kiln and Hay Storage

The use of time and space in this open space can be described. It is shown in Table 1.

Table 1 Use of Time and Space in Open Space

No.	Open space function	Use of Time	Use of Space
1.	Pottery kiln	Once in a week (pottery firing process done interchangeably by the craftsmen group)	A place to do pottery firing process
2.	Hay Storage	Once in a month(hay distribution from supplier to the craftsmen)	A place to keep hay communally that is being used in pottery firing process

As pottery craftsmen, their skills have been passed down through generations. In running their business, the craftsmen do not sell their products directly to the buyers but through pottery collectors. Not only the house is for residence but is also for economic activities, along with changes in social, economic, and cultural conditions which cause adjustments in its room arrangement (Kridarso, Tobing, & Siahaan, 2015).

There are two ways to adjust room arrangement according to Turner and Fichter (1972). First, it is housing adjustment, in which additional room arrangement are added to the house. Secondly, housing adaptation, in which inhabitants adjust to the condition of the house. These two forms of adjustments will be discussed in each type of productive house in pottery craftsmen settlement in Dukuh Krajan. Productive house type is divided based on the proportion of productive and domestic area. Silas (2000) divides the productive house into three types. First, it is the mixed type. The workplace becomes one with residence, but the residence is still the main function of the house. There are 39 houses that are categorized as mixed types with an average area about ± 96 m^2 in this area, as seen in Figure 4. These types of the productive house do not provide workplace inside the house but

use the side of the house or terrace as the workplace. For a mixed type, the used sample is in Mr. Mi house. This household only has one member who works as pottery craftsman, as shown in Figure 4.

Figure 4 Mixed Type-Side of the House as Workplace

To accommodate pottery production process, the craftsmen make housing adjustment by using additional roof on the side of the house. Additional roof creates new space which will be used as the workplace. Some shelves are also installed on the wall for the craftsman to put the pottery. Beside workplace, the craftsman also uses his yard as pottery drying area and raw material storage. As for the pottery storage, the craftsman uses some part of the kitchen, as shown in Figure 5.

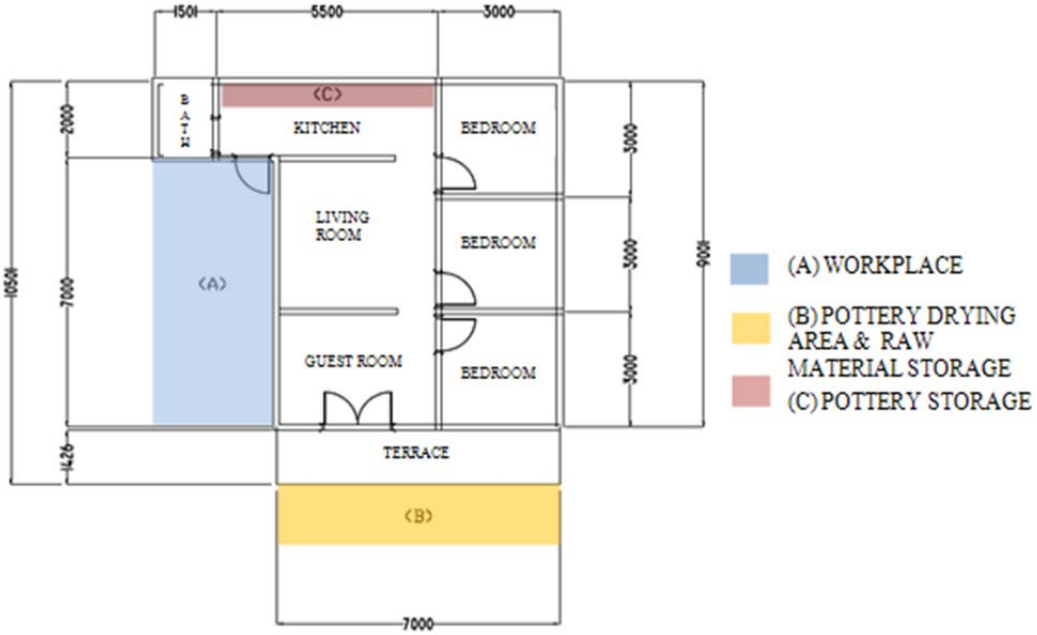

Figure 5 Layout of Mixed Type-Side of the House as Workplace

Meanwhile, mixed type of productive house which the workplace is located in front of the house/terrace will use Mrs. Si's house as a sample. This household has two family members who work as pottery craftsmen. The house is adjacent to another house, so there is no side of the house that can be used as the workplace. Based on this condition, to accommodate production process, the craftsman makes housing adaptation by using terrace as the workplace. To maximize space of terrace as a workplace, the craftsman added several columns to support the additional roof. Their living room is

also used as pottery storage. Pottery drying area and raw material storage are in their yard near the street because there is no more space left inside the house, as shown in Figure 6, 7, and 8.

Figure 6 Mixed Type-Terrace as Workplace

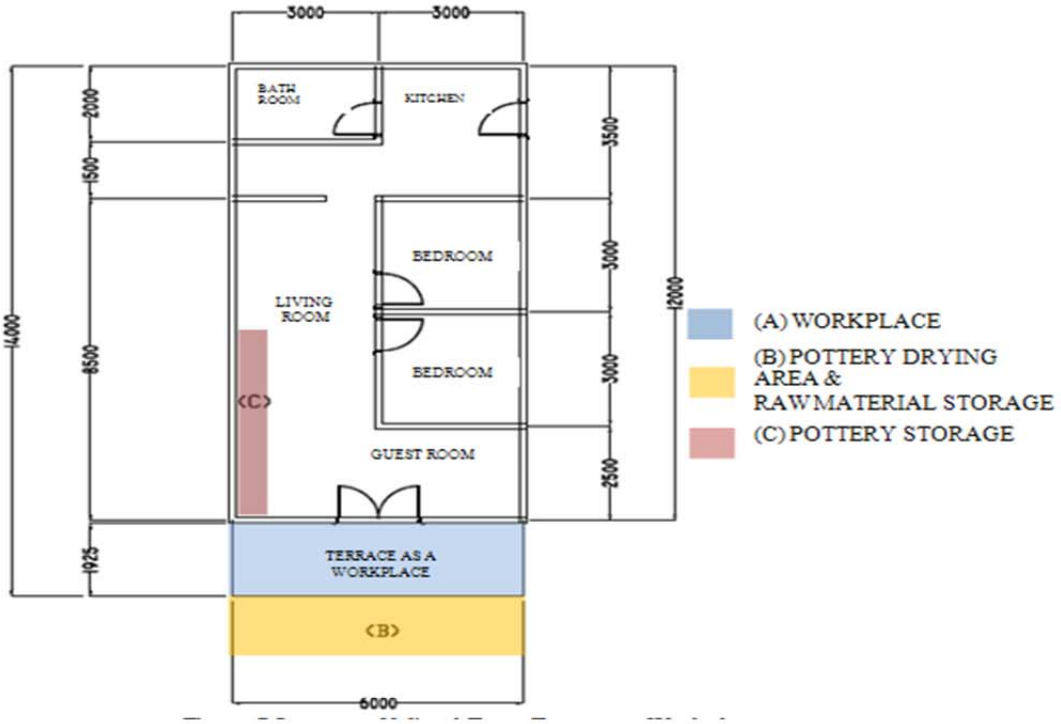

Figure 7 Layout of Mixed Type-Terrace as Workplace

Figure 8 Raw Material Storage near the Street

Secondly, it is the balanced type. The residence is separated from the workplace, but it is still inside of the same building. Also, the access to workplace sometimes is separated. There are 21 houses categorized as the balanced type with an average area about ± 104 m^2. Mrs. Sa's house will be used as a sample. This household has three family members working as the craftsmen. To accommodate pottery production, the craftsman applies house adaptation by using some part of the dining room as the workplace. In addition, they add new room inside the house as pottery storage. A large yard in front of the house is used as pottery drying area and raw material storage, as seen in Figure 9, 10, and 11.

Figure 9 Balanced Type Productive House

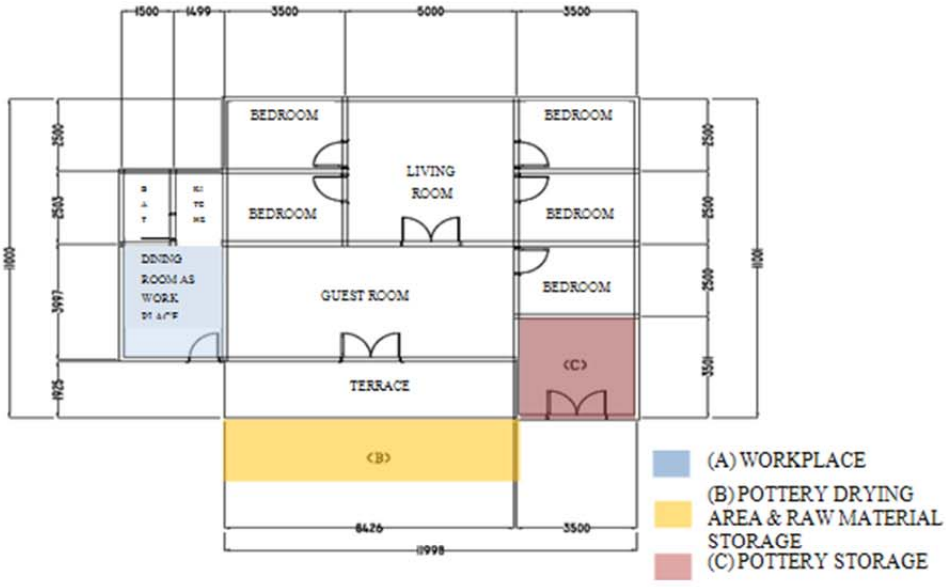

Figure 10 Layout of Balanced Type Productive House

Figure 11 Yard Used as Pottery Drying Area
and Raw Material Storage

Third, it is separated type. The workplace takes the dominant part in the house. It takes the most of the house. Sometimes the residence area is placed behind or in front of the workplace. There are only three houses categorized as the separated type with an average area ± 126 m^2. One of the examples is Mr. Ka's house. This household has two family members working as craftsmen. Housing adjustment has been done by adding a new building used as workplace behind the residence. The workplace is also used as pottery storage. In front of the workplace, there is shared yard used as pottery drying area and raw material storage. Separated type distinctively separates the economic and domestic area, as seen in Figure 12, 13, 14, and 15.

Figure 12 Separated Type Productive House

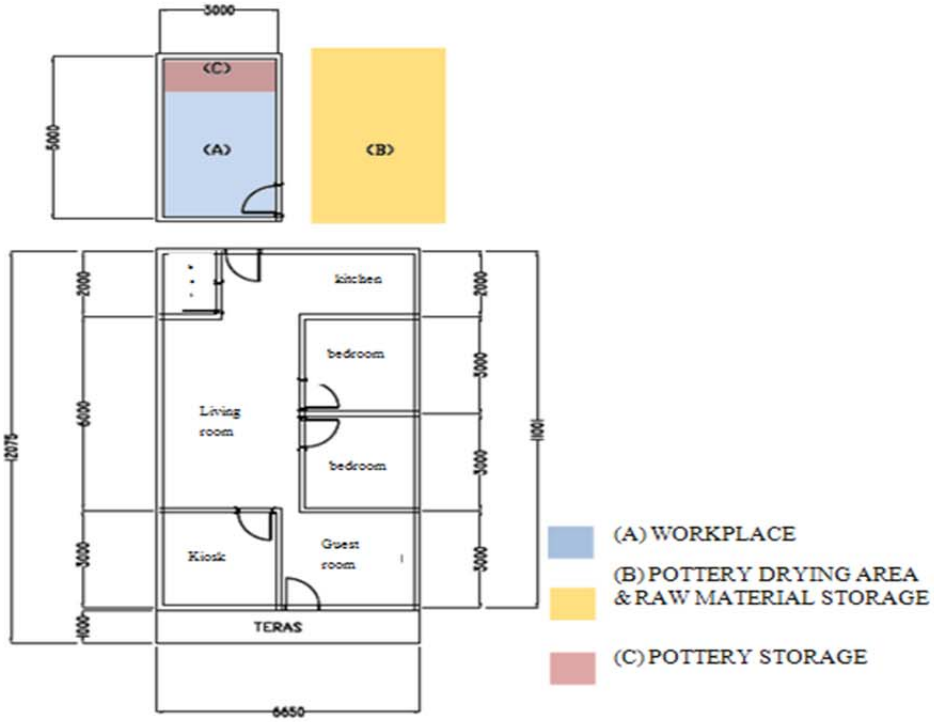

Figure 13 Layout of Separated Type Productive House


Figure 14 Inside the Workplace


Figure 15 Shared Yard for Pottery Drying Area and Raw Material Storage

From the three types of the productive house which have been mentioned before, It can be concluded that space needed by the pottery craftsmen are raw material, storage workplace, pottery drying area, pottery storage. Then, based on the sample of the productive house, the use of time, use of space and house modification, it can be concluded as the following Table 2.

Table 2 Use of Time, Use of Space, and House Modification in Pottery Craftsmen House

No.	Space function	Use of Time	Use of Space	House Modification
1.	Raw material storage	- Twice in a year (raw material distribution from supplier to the craftsman) - once in a two months(raw material process to pottery dough)	A place to store raw material	**House adaptation** Craftsmen use their yard or some part of the street (if they don't have the yard) as raw material storage.
2.	Workplace	Everyday, from 05.00-12.00	Place to form the pottery	**House adaptation** Craftsmen use some part of the dining room, terrace, side of the house as workplace with additional roof and column. **House adjustment** In separated type, craftsmen build simple building behind the main residence as a workplace.
3.	Pottery drying area	Everyday, from 08.00-16.00	Place to dry the pottery	**House adaptation** Craftsmen use their yard or some part of the street (if they don't have the yard) as pottery drying area.

Table 2 Use of Time, Use of Space, and House Modification in Pottery Craftsmen House (Continued)

No.	Space function	Use of Time	Use of Space	House Modification
4.	Pottery storage	Everytime	place to store pottery before and after burned	**House adaptation** Craftsmen use some part of the domestic area as storage, such as living room and kitchen. **House adjustment** In balanced type, Craftsmen added new room by using the partition for pottery storage.

Aside from three types of the productive house mentioned before there is another type founded. This type is pottery collector house.This productive house is owned by pottery collectors. There are four houses that are categorized as pottery collector house with the average area about ± 120 m^2. Buyers usually come to this house to buy pottery in large quantity. Hence the main function of pottery collector house is as main storage and products distributor. The sample is Mrs. Gi's house. The different activities between craftsmen and collectors cause different spacial pattern in their house. There is no workplace inside pottery collector house, but there is a large storage to store pottery from the craftsmen. Housing adaptation done by the pottery collectors is by using their terrace and yard as pottery drying area and product display area. In this house, there is also a truck garage. The collector uses the truck to deliver pottery in large quantities, as seen in Figure 16, 17, and 18.

Figure 16 Pottery Collector House

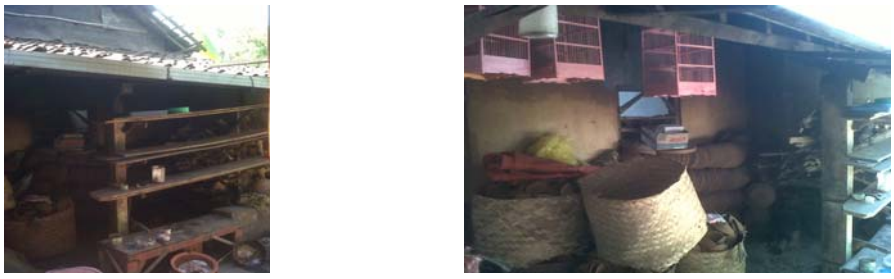

Figure 17 Pottery Storage inside Collector's House

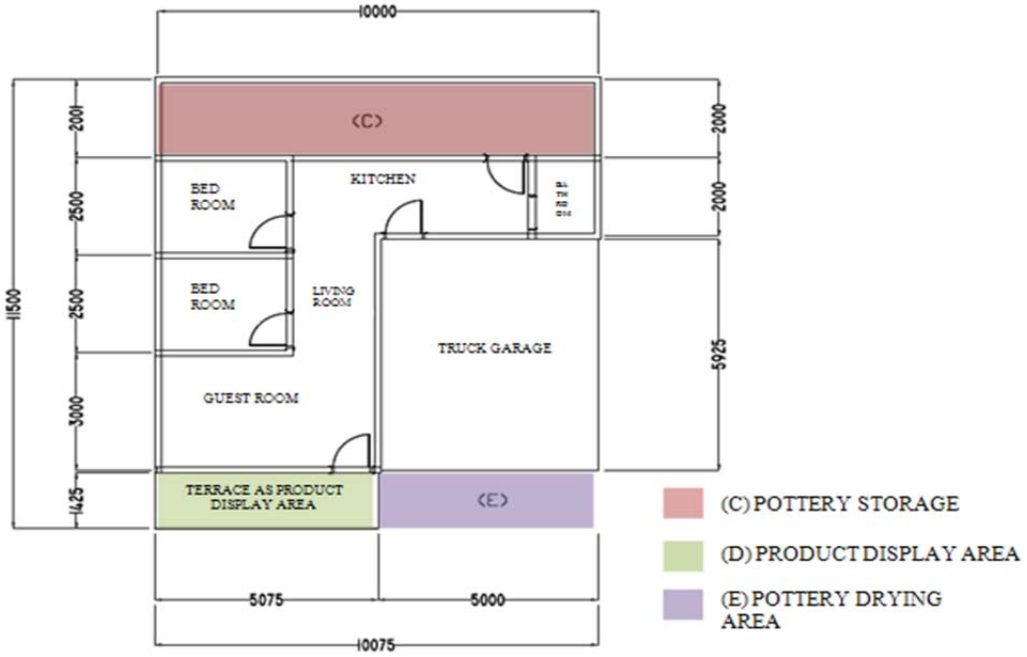

Figure 18 Layout of Pottery Collector House

Based on the sample of pottery collector house, the use of time, use of space and also house modification can be concluded. It is shown in Table 3.

Table 3 Use of Time, Use of Space, and House Modification in Pottery Collector House

No.	Space function	Use of Time	Use of Space	House Modification
1.	Product storage	- Once a week, (the collector collects pottery from the craftsmen)	Place to store pottery product collected from the craftsmen	The collectors have planned the space for storage
2.	Product display area	Everyday, from 07.00-17.00	Place to display pottery products.	**House adaptation** Collectors use terrace as product display area
3.	Pottery drying area	Everyday, from 08.00-16.00	Place to dry the pottery	**House adaptation** Collectors use their yard or some part of the street (if they don't have the yard) as pottery drying area.

The workplace in each productive house is located close to the street and pottery kiln. This chosen location is to make sure that the production process from raw material distribution to pottery firing process is going well. The position of the productive house, road access, and pottery kilns inside of the settlement can be seen in Figure 19.

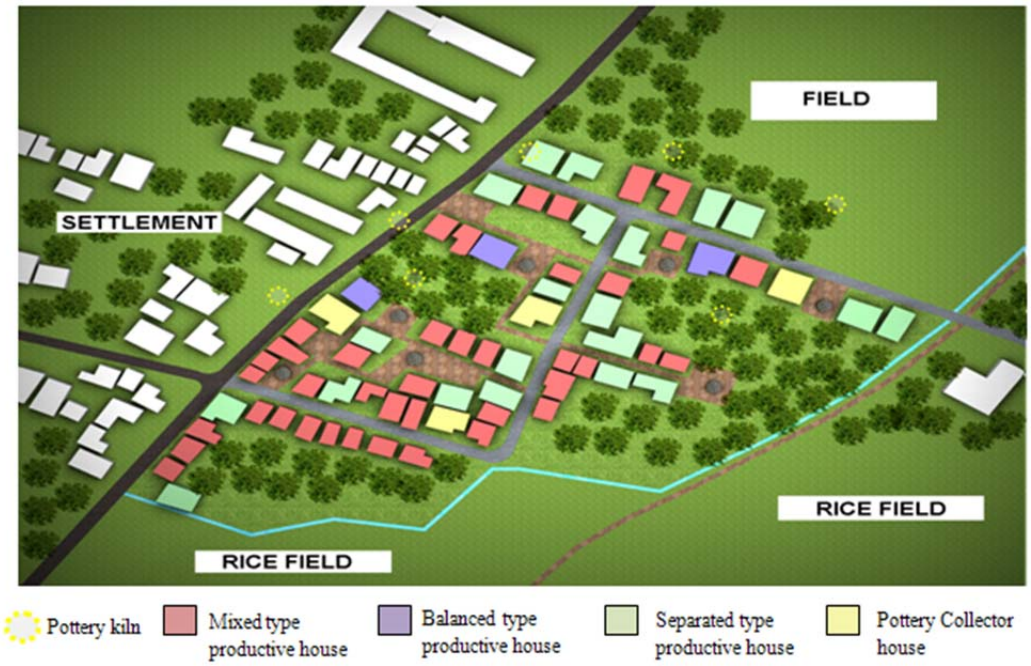

Figure 19 The Position of Productive House and Pottery Kilns in the Settlement

Most of the craftsmen do not have the land certificates. It is witnessed by village officials to determine their land boundary. Profession similarity creates a familial bond between the craftsmen which can be seen from the adjoining house conditions without clear boundaries and the use of shared space inside of the settlement. Shared space in the form of pottery kiln and hay storage becomes a place that brings all the craftsmen together. Hence, this open space also has the social function because this place also serves as a place for the craftsmen to socialize while waiting for firing process.

CONCLUSIONS

The majority of craftsmen make changes in their house to accommodate pottery production process. The changes done by the craftsmen to keep their business are in the form of housing adjustment and housing adaptation. Most of the changes in craftsmen house take place in the public area such as the terrace, yard and service area such as the kitchen. This is because pottery production process (from raw material process to pottery drying) requires close access to the street.While for the semi-public area such as dining room is used as pottery storage. The settlement orientation is along the streets. However, the open space in the form of pottery kiln and hay storage become the main orientation for production space in craftsmen house. Pottery kiln in the settlement is used interchangeably. While waiting for pottery firing process, the craftsmen take their time to socialize with the others. The function of open space is not only as space for pottery firing process but also as open cultural space that reflects the characteristic of the pottery craftsmen settlement.

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