

# **Social Housing for Social Design in Indonesia**

## **(A Case of Dupak Bangunrejo, Surabaya)**

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### **ABSTRACT**

A social housing addresses informal settlements for low-income households in urban areas. This study aims to analyze social housing related to social design theories in order to determine the products and services. In addition, this study establishes social problems which are trying to be solved by social housing as a social design. Dupak Bangunrejo, a three-story, was selected as the research subject. A qualitative descriptive method was conducted to observe and analyze the social design for products and services. Products are determined as units, public spaces (outdoor and indoor), balconies, communal showers, and kitchens. Services are clean water, electricity, waste management, and security system. Furthermore, this study establishes that social housing was built due to the growth of informal settlements in urban areas and ultimately affects the environment, such as urban sprawl, waste disposal, water and air pollution, and public diseases. In conclusion, Dupak Bangunrejo social housing as a social design product was built to address the social problems and to support occupants' behavior alteration.

Keywords: social housing, social design, social problems, product and services, behavior change.

### **INTRODUCTION**

According to statistical data, Surabaya population was 2.87 million in 2020, and the population density was 8,798 people/km<sup>2</sup> in an area of 326.81 km<sup>2</sup> (BPS Kota Surabaya, 2020). Based on the data, Surabaya's population density is triggered by the high of urbanization from rural area to cities. This causes social problems such as informal settlements in Surabaya. The number of informal settlements causes the impact of social problems that are increasingly widespread (Indahri, 2017; Silas, 2019). Thus, the government is trying to provide settlements to overcome the emergence of new informal settlements in Surabaya. Therefore, since 1985, Surabaya government has built social housing, to meet the housing needs (Silas, 1990).

A study from the Laboratory of Housing and Human Settlement, Institut Teknologi Sepuluh Nopember Surabaya (ITS), explained the purposes of social housing as transitory housing (ITS, 2015). This means that social housing is a place for occupants to proceed of achieving stability, be able to follow the development of a city and keep up with the development of technology.

Furthermore, several studies on social housing talk about space, facilities, and occupant satisfaction living in the unit (Aryani & Jen-Tu, 2020; Kisnarini, 2015; Kisnarini et al., 2012, 2015; Warouw et al., 2010). However, the relationship between social housing as a social design is not discussed related to the social

problems in Surabaya. In fact, social housing was built in order to overcome the problem due to population density, which means it is intended for the needs of many people or one community/social.

The social design has a broad and varied definition that has been defined based on several theories and research (Margolin & Margolin, 2002; Papanek & Fuller, 1972; Whiteley, 1993). In addition, a review based on the journal states that social design is thinking about building a community (Chen et al., 2016).

Hence, a designer thinks about how to build community capacity and how the resulting design can be in accordance with community leadership (Yee & White, 2016). Meanwhile, a research report classifies social design in social entrepreneurship, which must prioritize socially responsible design and design activism (Armstrong et al., 2014)

Moreover, a social design is created in order to influence human behavior. Accordingly, social design in its creation can influence human behavior, both in the form of products and services (Tromp, 2013). Consequently, the definition of the 'can influence human behavior' can be related to a built environment which is social housing.

According to the Collins English Dictionary, a product is something that is produced in large quantities or a result of a manufacturing process and service defines as something that the public needs as 'service' which is facilities and infrastructure that support the products (Hanks, 1979).

This study is conducted based on the above description of social housing and social design theories and evaluates the products and services in a social housing building.

The aims of this study are developed based on research questions as follows:

1. What are the products and services in social housing related to social design?
2. What are the social problems that can be solved by social housing as a social design?

## **LITERATURE REVIEW**

### **2.1. Social housing in Surabaya**

Social housing is an affordable housing and is built to overcome the emergence of slum settlements and meet the housing needs for low-income households in urban areas (ITS, 2015). Therefore, Surabaya has been building many social housings in order to overcome the problem of increased high demands for housing due to population density (Rachmawati et al., 2015).

Furthermore, urbanization and the increasing population have made social housing a major need in Surabaya (Aryani & Jen-Tu, 2020; Kisnarini, 2015). Research on social problems in Surabaya explains some of the problems caused by urbanization. This problem leads to the unavailability of proper housing in Surabaya. Thus, many

informal settlements grow along with the growth of other social problems. Hence, it needs to have a solution in order to provide a livable city for the citizens.

## **2.2. Social Design**

It is stated in a book that design is every activity carried out by human beings. Hence, by definition, design is translated into the basis of every human activity (Papanek & Fuller, 1972). It means, every human activity, whether it is done consciously or not, is a design activity. In argue, a Chinese philosopher, Lao Tse in Papanek & Fuller, stated that design is a conscious sacrifice to do meaningful work (Papanek & Fuller, 1972). Hence, whatever humans do in the context of designing is an activity that will consciously produce 'something' with benefits.

It is further explained that a design must be ecologically responsible and socially responsive. This means the design must provide goodness to the environment and eventually, the design must be able to think and have a good impact on environmental sustainability (Pearce, 1980).

Different statements are discussed in the thesis report that the implications of social design activities are 'tools' and a designer is an expert who can solve social problems, develop products or services in serving the community, and be socially aware of taking responsibility for the possible social consequences of a design (Tromp, 2013). Thus, it can be further concluded that social design focuses on developing products and services to address social problems (Tromp & Hekkert, 2018). Hence, it is necessary to explain in cases, what social problems have been able to be solved by social design.

## **2.3. Products and Services of Housing Design**

In a review of the relationship between housing design and social theory, a social activist states several important things that form the basis for the design of social housing. Based on the review, the designers should concern and focus on the social structure desire and how to use design to get it.

There is the need for people, design for social fabric (creating a sense of togetherness among occupants), design for social structure, and paying attention to the physical design of the building floor, lobbies, concierge, site design, playground, the needs of the mother, children, and teenagers (Wood, 1961). In addition, the reviews emphasize the basic needs that are the main needs of every occupant in social housing. Thus, it can be concluded that products are the physical result of housing design, while services are services that are provided together with the building.

## **2.4. Social design to solve social problems and support behavior change**

Reviews of housing design are described by stating that housing design must take into account the needs of the community, or in this case the users (Wood, 1961). The report of the thesis describes that design is social; this is because a product in the design must have a social impact on users and everyday life (Vial, 2014). However, social design has various meanings and it does not discuss specifically

on certain scientific bases. This is because the design has a very broad discussion. Therefore, it is necessary to give boundaries to focus more on the results of the discussion in order to find out what problems can be solved in social design.

It was further explained in order to meet the needs of the community, the social design considers products and services. These products and services are intended to help the community behave better which benefits the community itself (Tromp, 2013). Therefore, referring to the results of a design that must provide goodness and benefits for the user, a designer must think responsibly towards other living creatures or the environment (Antonelli, 2013).

## **METHODOLOGY**

This study uses a qualitative method which presents the social world, in terms of concepts, problems and behavior regarding the human being studied (Moleong, 2007). Furthermore, it focuses on the social changes of occupants after living in social housing buildings.

### **3.1. Research Subject**

One building in a complex of Dupak Bangunrejo social housing, a three-story, was selected as a research subject. The first floor has nine units with a private shower in each unit and a communal kitchen. On the second and third floors, there are eight units facilitated by a balcony, communal shower and kitchen.

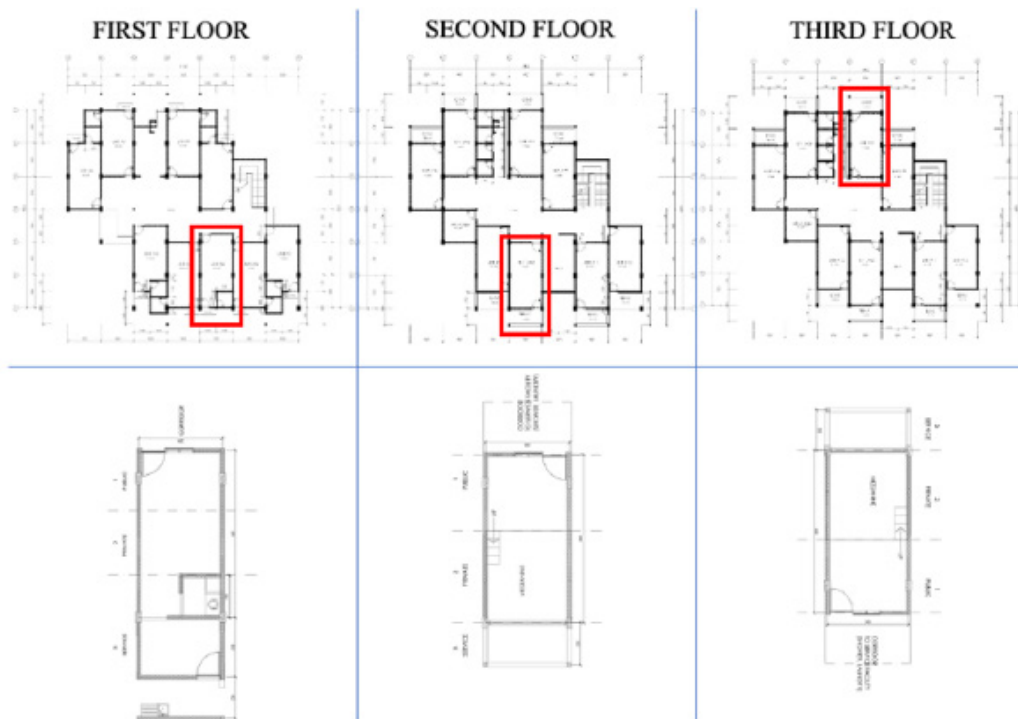


Image 1 Layout Plans and Units on First, Second, and Third Floor (Source: Aryani, 2022)

### **3.2. Data Collection and Analysis Method**

All data were obtained from local government's documentations and literatures. The analysis was conducted based on field observation and interview.

**Table 1 Research Question, Research Subject, Method, Result.**  
(Source: Aryani, 2022)

Research Question	Research Subject	Method	Result
Products and services at social housing (Q1)	Block B, three floors of social housing.	Documentation, observation	Units, public space (outdoor-indoor), balcony, communal shower-kitchen, clean water, electricity, waste management, security system.
Social problems to be solved (Q2)	Units, public space (outdoor-indoor), balcony, communal shower-kitchen, clean water, electricity, waste management, security system.	Documentation, observation, informal interview	Informal settlements (urban sprawl, over population, waste disposal, water pollution, air pollution, public diseases).

## RESULT & DISCUSSION

### 4.1. Products and services at social housing

A. Based on the understanding of the product, 'something that can be measured physically', are:

- a. first, the unit as a place for occupants to live and carry out their daily activities. The unit is the main part of the social housing building.
- b. second, public spaces, corridor (indoor) and public aisle (outdoor) within the building.
- c. third, the balconies. Each unit on the second and third floors has a balcony that occupants can use to interact directly with the outdoor.
- d. fourth, a communal area for shower and kitchen to hold services activities such as shower, laundry, cooking, etc.

B. Service is the system that support the products, as follows:

- a. clean water, electricity, waste management, and security system.

Furthermore, regarding products and services in housing design, in-depth research needs to be carried out to find the feasible process between products and services. Another study should be held on how products and services are made to be able to change human behavior.

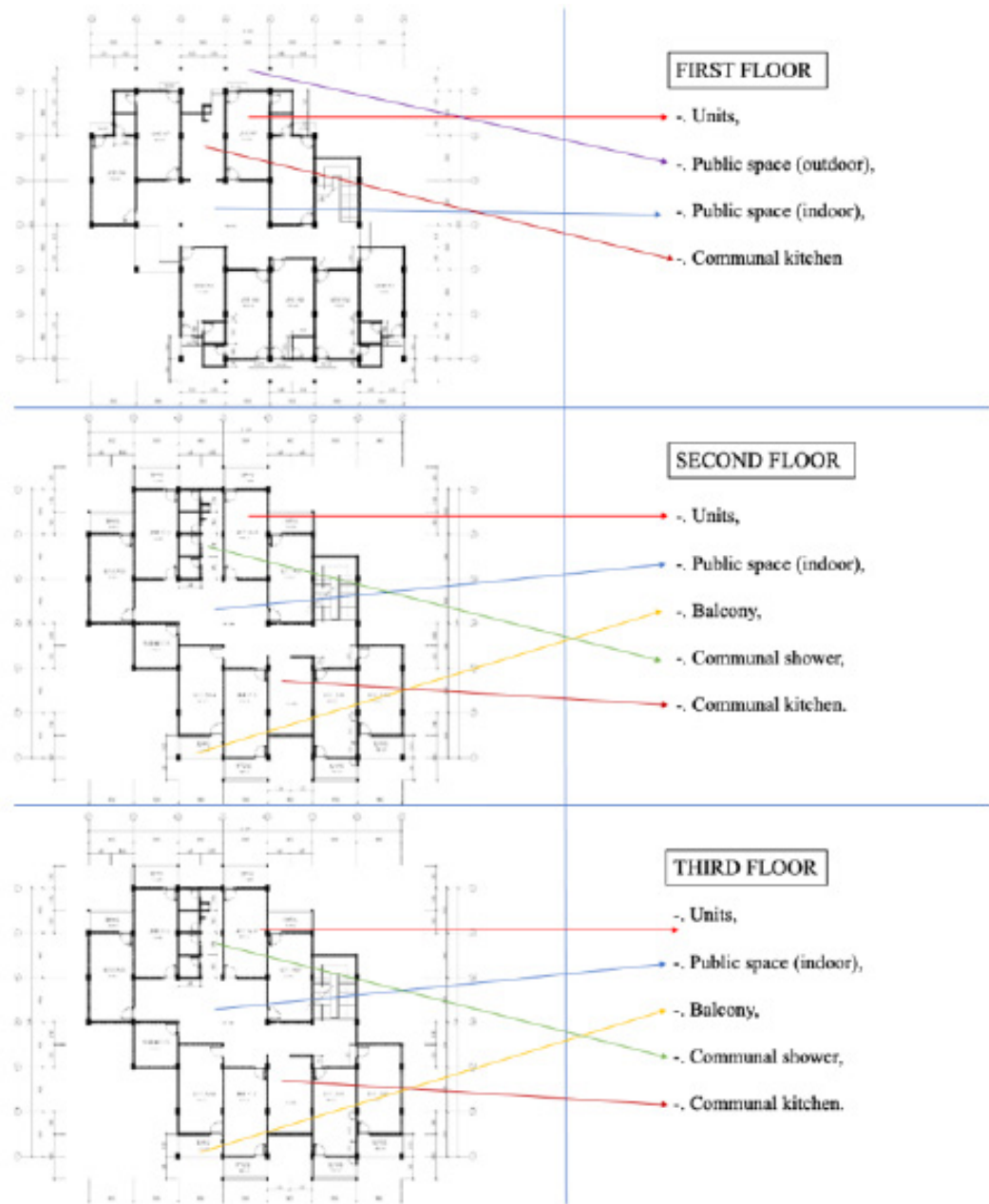


Image 2 Products in Social Housing on First, Second, and Third Floor. (Source: Aryani, 2022)

**Table 2 Social Design, Products, Services. (Source: Aryani, 2022)**

<b>Social Design</b>	<b>Products</b>	<b>Services</b>
First floor	Units	Clean water
	Public spaces (outdoor)	Electricity
	Public spaces (indoor)	Waste management
	Communal kitchen	Security system
Second floor	Units	Clean water
	Public spaces (indoor)	Electricity
	Balcony	Waste management
	Communal shower	Security system
	Communal kitchen	-
Third floor	Units	Clean water
	Public spaces (indoor)	Electricity
	Balcony	Waste management
	Communal shower	Security system
	Communal kitchen	-

#### **4.2. Social housing and social design are for social problems**

Previously, occupants lived in impermanent and irregular housing that was informal settlements. The houses were made of non-permanent (semi-permanent) materials. In addition, there was no adequate facilities and infrastructure to support the daily activities.

Social housing gives a more suitable place to live in the form of units, which are built with permanent materials. Moreover, the residence has certain facilities, such as clean water, electricity, a sewage system, and also environmental security. Hence, social housing requires changes in occupants' habits in their behavior.

Social design has a huge definition in general based on studies and research. Some the researchers determine the meaning to be more 'social' within the design. Therefore, further research can be done in order to investigate the relationship between social design and the environment, especially to support environmental sustainability.

**Table 3 Initial Design, Social Design, Floor, Behavior Change.**  
 (Source: Aryani, 2022)

Initial Design		Social Design		Floor		Behavior Change
Products	Huts, landed		Units, three story	First, Third	Second,	√
	Small alley		P u b l i c s p a c e s (outdoor)	First		√
	Small alley	Products	P u b l i c s p a c e s (indoor)	Second, Third		√
	None		Balcony	Second, Third		√
	Bath in the river		Communal shower	Second, Third		√
	Cook in alley		Communal kitchen	First, Third	Second,	√
Services	None		Clean water	All Floors, outdoor		√
	None		Electricity	All Floors, outdoor		√
	None	Services	W a s t e management	All Floors, outdoor		√
	None		S e c u r i t y system	All Floors, outdoor		√

## CONCLUSION

This study determines products as the outcome of design that can be enjoyed physically and can be measured, namely units, public spaces (outdoor and indoor), balconies, and communal showers and kitchens. Meanwhile, services include clean water, electricity, waste management, and security facilities.

In addition, this study establishes that social housing overcomes social problems such as the growth of informal settlements in urban areas and ultimately affects the environment, such as urban sprawl, waste disposal, water and air pollution, and public diseases.

In conclusion, social housing is a social design that is built to overcome social problems occur and support behavior change.

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