www.bircu-journal.com/index.php/birci
Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)
Budapest Institute

# Influence of Government Programs *Green and Clean* against Spatial Morphology occupancy Margorukun Surabaya

**Heru Hendri Iswanto[1], Lisa Dwi Wulandari[2], Sri Utami[3]**
[1,2,3]*Universitas Brawijaya, Malang, Indonesia*
*heruhendri.hh@gmail.com, lisaromansya@ub.ac.id, sriutamiazis@gmail.com*

**Abstract**

*Margorukun village is one of the densely populated villages in the center of Surabaya. Margorukun was previously known as a slum area, but then changed to K, clean and green. Margorukun even became a pilot village that succeeded in becoming an area clean and green through the Surabaya Green and Green government program Clean (SGC). The purpose of this study was to determine the spatial morphology of housing in Kampung Margorukun before and after participating in government programs. The research method used in this study is descriptive with a diachronic approach to analyze variables study. The results of this study show how the spatial morphology of the dwellings in Kampung Margorukun before and after participating in the Surabaya Green and Clean (SGC) government program.*

Keywords
morphology; residential spatial; Kampung Margorukun

## I. Introduction

For the sake of realizing a livable urban village and improving the quality of the residential environment. Since 2005, the Surabaya City Government has held the Surabaya *Green and Clean program* as a form of socialization strategy, education and appreciation to the community (Kumalasari, 2005) . This program started with concerns about seeing waste, environmental conditions, and people's lifestyles that are not environmentally friendly. So, there is a strong desire to continue to improve the quality of Surabaya's environment. Apart from being implemented by the Surabaya City Government, this program also received support from the private sector, especially from Jawa Pos and Unilever. Surabaya *Green and Clean program* is followed by all urban village in Surabaya with several categories that contested is *the best of the best* , the village with Best Environmental and Water Management Programme, Green Village, Village with the Most Active Citizen Role, Ter - innovation village , and independent village . the area that Won an award as a Green Village is Margorukun Village, Gundih Village, Bubutan District (Prasetiyo & Suyanto, 2013) .

Margorukun village is located in the neighborhood of RT 07/ RW 10, Gundih Village, Bubutan District, Surabaya City. This village in Surabaya is a clean and green pilot village. Even though the location is on the edge of the railroad tracks, this village looks beautiful because the plants are lined up on the right and left side of the village road. This area used to be a slum area and is known for its high crime rate, but the awareness of the residents to build their village has changed all those ugly predicates, so that this village has received several awards as a clean and green village (Azizah, 2014) . The village, which is located on the outskirts of the Pasar Turi Railway Station, Surabaya , has now been neatly and cleanly arranged. No more wild and rundown houses. Green plants filled every corner of the village. Since participation in the green village program in 2007 until the current conditions prove The environment in Margorukun Village is still preserved

well, then Margorukun Village is made as a pilot village, this is affect the spatial arrangement of the residential community of Kampung Margorukun . With the Surabaya *Green and Clean (* SGC ) Program, the spatial arrangement of residence the people of Kampung Margorukun led to the emergence of a new function of housing, not only as a residence but also functioned as a green village activity room .

Development is a change towards improvement (Shah et al, 2020). The development of the basic needs of residents, both desires from oneself or adapting to the times to changing housing for improvement of the occupant's economy is a non-physical spatial change of occupancy. According to (Doxiadis, 1967) housing is one of the forming settlements as a where humans live ( *shell* ). The development of the residential function in Margorukun Village has made it community housing as an educational tourism object . Since 2007, Kampung Margorukun's participation in the Surabaya *Green and Clean* (SGC) program has won several awards, including: 2008 as Champion of Surabaya *Green and Clean* (SGC), 2009 as Champion of Surabaya *Green and Clean* (SGC), 2013 as Champion Champion of Surabaya *Green and Clean* (SGC), 2015 was awarded as the best IPAL Processing, 2016 was awarded as Best Community Participation, in 2019 entered the top 75 of Kampung Maju, so it is not wrong if margorukun becomes a tourist destination because of its special characteristics in this village . The purpose of this research is to find out and analyzing the spatial morphology of community housing in Margorukun Village according to the use of ordinary houses that develop into productive homes before and after participating in the Surabaya *Green and Clean* (SGC) government program and can be used as the basis for the development of structuring on a growing residential spatial and can be used as an example for other villages.

## II. Review of Literature

Basically occupancy can be interpreted as someone's residence or a family in doing activities day-to-day as a process of self-development (Tutuko, 2008) . The definition of occupancy is also in harmony with a statement from (Newmark, Norma L., 1977) who explained that The house is a place for humans individually and in groups for shelter in carrying out daily activities. Based on the description of the meaning of house Previously, it can be concluded that a residence is a place to live, a place to live shelter and a place of security individuals and groups in run daily life. According to (Silas, J., & Setiawan, 2000) explained that the function of housing is not only as a place to live, but also as a place to live. shelter, or a place to rest only, but the house also functions for collect household resources by looking at the opportunities that exist for more related productive _ with activities, so that the residence can also be used as a productive house or also known as *home-based enterprises* .

According to (Purnamasari et al., 2010) System inner space residence can be seen from the function of space (primary function, secondary function, and tertiary function), the axis of space and the zone of space. To determine the spatial morphology of the dwelling, it can be seen through the function of space, spatial dimensions, space zones and circulation (Aristyani et al., 2016) . Another opinion (Krier, 2001) that the spatial element of a building is the organization of space which consists of the pattern of space, circulation, and orientation of the building. Changes to the spatial occupancy can disclosed with dimension change, change by subtraction and change by addition which is existence new developments and innovations (Ching, 1996) . Dimensions of space related to the length, width, and height of a space. After each room, each room size is obtained, then it is

accumulated into the area of each room. In addition, in the aspect of discussing the dimensions of space, the percentage of building area on the site is also discussed (Olivia et al., 2015) . When it comes to housing, the aspect of spatial dimensions can also be seen from the changes in each dwelling through three ways of change, namely by dividing the function of space, utilizing functions and adding space (Marsoyo, 2012) . One way to change the function of a dwelling to become a productive dwelling is by utilizing some of the space or maximizing the remaining land, according to (Ronarizkia et al., 2021) the factor causing the change in residential space is an economic function. Meanwhile, according to (Ulfa et al., 2011) the factors that influence changes in residential space are basic human needs, new technology, lifestyle, economic factors, inheritance rights systems and culture.

## III. Research Method

This research use desciptive qualitative approach. Descriptive method This is to describe the spatial conditions of the dwelling, by going through the observation stage, interviews and documentation. The analysis used in this study is diachronic or *historical reading* which is an analytical method used to study an object observations from time to time and describes changes in the housing aspect in Kampung Margorukun . The location and object of the research is a residence in Margorukun Village which has experienced a change in the spatial of its residence due to the influence of the Surabaya *green and clean* (SGC) government program . The selection of the occupancy sample in this study used *purposive sampling method* according to predetermined criteria. Stages of research this includes the data collection stage, the data analysis stage, the data synthesis stage and conclusion. The data collection stage includes primary data collection and secondary data collection and determination of research variables. Data collection Primarily carried out by observing the research location, interviews with respondents as candidates and selected samples and documentation of the results of interviews and observations as supporting data at the analysis stage. Meanwhile, secondary data collection obtained from relevant agencies that have data related to research. On the analysis stage of the spatial morphology of the dwelling uses a diachronic approach with comparing the initial spatial conditions of the settlements built with the year 20 19 for knowing the form of changes that occur in the spatial occupancy according to the variables that have been determined. The research variable used is the function space, space dimensions , space zones , circulation and building orientation. The data synthesis stage is the conclusion of the analysis that has been done.


***Figure 1.*** *Location map of Kampung Margorukun*

## IV. Results and Discussion

### 4.1 Occupancy Spatial Morphology Identification and Analysis

The history of Margorukun Village is inseparable from the Rail Line and Pasar Turi Station. On April 8, 1875, the Dutch government through Staatsspowegen (SS) built the Surabaya-Pasuruan-Malang route. Construction continued on January 1, 1886, the company Staatssporwegen (SS) built the Surabaya-Kalimas River route, and Tanjung Priok Port. The construction of the railway line is carried out in stages over decades. Then in 1910-1919, the Dutch built Pasar Turi Station to transport agricultural products abroad via Tanjung Perak Port (KAI Heritage, 2017) . From these data, it can be concluded that the Dutch government initially built railroads in several strategic locations that had been determined. Then this development program continued with the construction of Pasar Turi Station. The number of companies transporting goods from Pasar Turi Station to Tanjung Perak Harbor resulted in the growth of warehouses around the station. At that time, Margorukun Village was known to the people of Kandang Sapi Village because it was the location of a cowshed warehouse.

In its development, Kampung Margorukun experienced additional building functions due to the presence of the influence of the Surabaya *green and clean* (SGC) government program. The dominance of residential areas and areas that change the spatial arrangement of a good and clean seem pleasant to visit as a tourist destination and a pilot village. Residential functions that follow the Surabaya *green and clean* (SGC) government program can be found in almost all residential areas and the Margorukun Village area. The housing criteria used as the research sample are the houses owned by the elders and stakeholders in Margorukun Village, because these two criteria are expected to represent all the activities of the Margorukun Village community. Based on the criteria for selecting the sample, there were 8 residential units that met the criteria for the research sample (Figure 2).

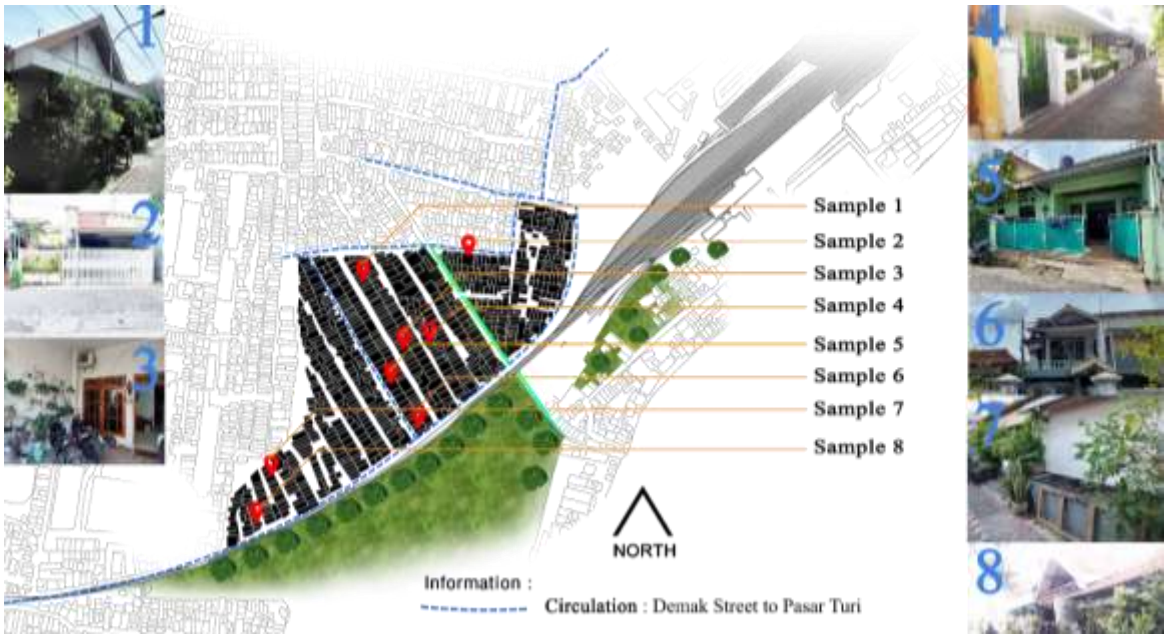


***Figure 2.*** *Occupancy sample distribution*

The morphology of the spatial occupancy can be seen from several aspects according to the research variables that have been determined, including:

## a. Space Function

The function of housing in the Margorukun village before joining the Surabaya *green and clean* (SGC) government program was an ordinary dwelling. The function of the space in the dwelling is according to the needs and the nature of the space as a socialization room (living room, family room and terrace) and a rest room (bathroom and bedroom). Changes in the spatial sample of this residence after participating in the Surabaya green and clean (SGC) government program in the form of adding space for *urban farming activities* and reforestation in the outer space of the residential site. Changes in the function of the interior space in each residential sample tend to add space horizontally and vertically or add the function of a support/service room (kitchen and laundry). The addition to the function of the residential space does not affect the general function of the dwelling and the basic functions of the residential space.

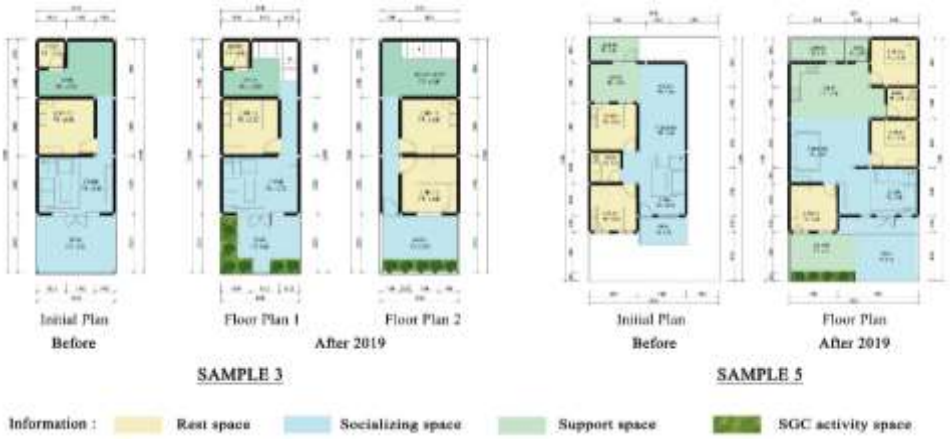


***Figure 3.*** *Space Function*

## b. Space Dimension

Dimensions in each residential sample there are spaces forming a dwelling that has dimensions of length and width that make up the amount of space according to the needs of space users. The spatial dimensions of this residential sample use 3-5% for *urban farming* activities and reforestation of residential sites where most of the space is used as a place to live. The addition of space dimensions is due to the addition of space horizontally towards the front and/or back of the residence which has excess outside space on the previous residential site. The addition of space in the dwelling causes the dimensions of the dwelling to increase by 30% from the previous residential site.


***Figure 4.*** *Room dimensions*

## c. Space Zone

The spatial space zone in each residential sample before developing was divided into a public zone composed of socialization rooms, a semi-public zone composed of support/service rooms and a private zone composed of rest rooms. The zones for each residential sample are also differentiated according to the user of the space in the dwelling, occupants and visitors/guests. The zoning changes found in this residential sample are generally in the front and back of the residence in the form of an outdoor living room or kitchen and clothesline into an expansion of the semi-public zone.


***Figure 5.*** *Space Zone*

## d. Circulation

Circulation in occupancy in each occupancy sample is dominated by linear circulation. The rooms are on the right and left side of the circulation and there is even a room that is used for circulation. In this residence before there were urban farming activities and greening the circulation was more functioned by residents in the form of a linear circulation configuration. The existence of *urban farming* and reforestation activities does not affect the residential circulation.

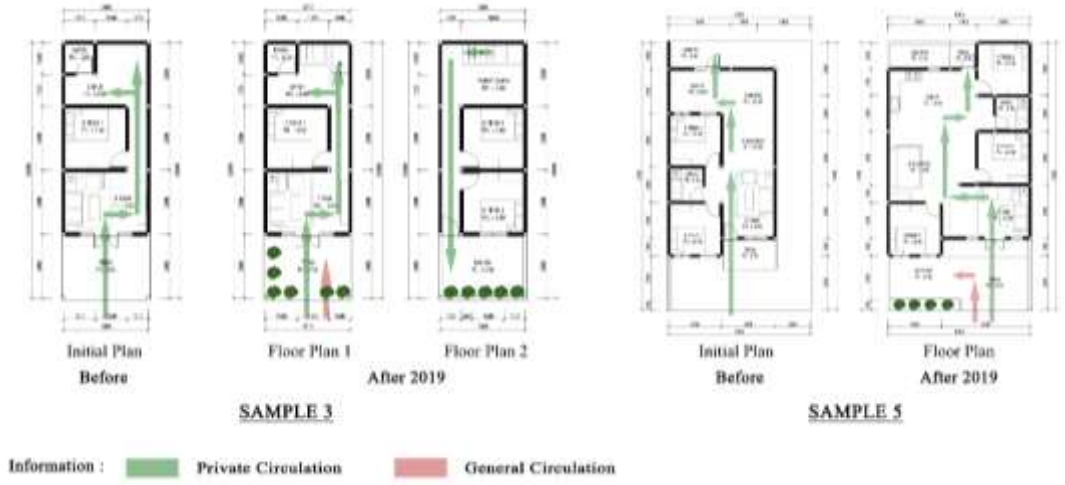


***Figure 6.*** *Circulation*

## e. Building orientation

The orientation of residential buildings in each sample is dominated by facing the circulation area. The orientation of the building does not change and regularly faces the road. The space for *urban farming* and reforestation activities which is dominated by the outer space of the residential site makes the combination of each residence beautiful to look at, so that the spatial arrangement of the dwelling makes the Margorukun Village area green.


***Figure 7.*** *Building orientation and environmental conditions of Kampung Margorukun*

### 4.2 Residential Spatial Morphology Synthesis

The results of the analysis of the discussion regarding the identification and analysis of spatial morphology housing in Margorukun Village, the results of the synthesis are obtained as following:

**Table l.** Synthesis of residential spatial morphology

| Variable | Information |
|---|---|
| **Space Function** | Changes in the function of space in residential areas tend to add or replace the function of space become a space for urban farming and reforestation activities that cause basic functions housing has changed with the reduction or addition of the type of space and causing the general function of the dwelling to turn into a productive dwelling |
| **Space Dimension** | Increasing the function of space in residential spatial by increasing space horizontally to the side, front and back of the residence causing the dimensions of the dwelling to increase up to 30 % for dwellings that have remaining space outside the residential footprint. Apart from that change the function of space in the dwelling causes a change in the dimensions of the function of a particular space, however does not cause a change in the dimensions of the dwelling, because it uses maximum occupancy . |
| **Space Zone** | Changes in residential zones tend to increase with the expansion of the semi-public zone on the side and rear of the residence by utilizing the outdoor space of the residential site or existing residential space. As well as the addition with the expansion of the public zone on the front housing by changing the function of the socialization room into a green open space or *urban farming* and reforestation activity space. |
| **Circulation** | Circulation changes in spatial housing with the addition of a circulation function for visitors due to the space with the function of *urban farming* and reforestation activities . The addition of space in the dwelling does not cause the circulation to change but remains in the form of branching linear that uses space outside the residential site as a circulation center . |
| **Building Orientation** | The orientation of residential buildings in each sample is dominated by facing the circulation area. The orientation of the building does not change and regularly faces the road. The space for urban farming and reforestation activities which are dominated by the outer space of the residential site makes the combination of each residence beautiful to look at, so that the spatial arrangement of the dwelling makes the Margorukun Village area green . |

### 4.3 Factors Causing Occupancy Spatial Morphology

a. Basic human needs
   The increasing number of occupants makes the function of space in residential areas develop according to need, the Surabaya Green and Clean (SGC) government program is a driver and motivation for the community to arrange livable housing as an effort to improve environmental quality.
b. Culture
   The level of community participation in Margorukun Village to take part in the Surabaya *Green and Clean* (SGC) government program, caused a change in the function of the outer residential space and affected the area to become a residential area. *Green and Clean.*

## V. Conclusion

The spatial morphology of dwellings in Margorukun Village can be known according to the variables research that has been determined, namely the function of space, space dimensions, space zones, circulation and building orientation. Changes in the function of space tend to add space for *urban farming activities* and reforestation in the outer space of the residential site and circulation path. The addition of space Using the outdoor space of the residential site causes the addition of residential dimensions to the front and back of the residence. So that the spatial zone in residential spatial experiences changes with the addition of areas in the public zone and semi-public zone. Change on the spatial occupancy of the occupancy sample also affects the circulation in the spatial occupancy which shown in the addition of the circulation function in the spatial occupancy. The orientation of the building which tends to face the direction of circulation creates a combination between residences and forms the Margorukun Village area into *Green and Clean.* Factors that influence the spatial change of the residence of Kampung Margorukun after participating in the Surabaya *Green and Clean* (SGC) government program are basic human and cultural needs.

## References


Aristyani, MP, Wulandari, LD, & Utami, S. (2016). *Spatial Morphology of Occupancy in Sendangduwur Tourism Village, Lamongan Regency* .

Azizah, S. (2014). The Study of Surabaya's Margorukun Village as a Green Village. *Proceedings of the National Seminar, Faculty of Engineering, Warmadewa University, Bali , 1* (69), 5–24.

Ching, FD (1996). *Form, space, and arrangement. Jakarta: Erlangga Publisher.*

Doxiadis, CA (1967). *Introduction to The Science of Human Settlements* .

KAI Heritage. (2017). History of Railways. In *PT Kereta Api Indonesia Unit Architecture & Preservation* . https://heritage.kai.id/page/sejarah-perkeretapian

Krier, R. (2001). *Architectural Composition. Jakarta: Erlangga Publisher.*

Kumalasari, V. (2005). Evaluation of the Surabaya Green And Clean Program Based on Sustainable Development (Study at the Surabaya City Sanitation and Gardening Service). *Journal of Public Administration, Brawijaya University, Malang , 3* (10), 1753–1757.

Marsoyo, A. (2012). *Constructing spatial capital: household adaptation strategies in home-based enterprises in Yogyakarta (Doctoral dissertation, Newcastle University).*

Newmark, Norma L., and PJT (1977). *Self, Space, and Shelter: An Introduction to Housing. New York: Harper and Row Publisher Inc* .

Olivia, I., Dinar, H., Wulandari, LD, & Tri, S. (2015). Morphology of the Wood Lathe Craft Area in the Tourism Village of Blitar City. *Thesis-Based Articles , 3* (4), 1–8.

Prasetiyo, WH, & Suyanto, T. (2013). Environmental care character education strategy through the green village program in Kampung Margorukun Surabaya. *Morals and Citizenship Studies , 2* (1), 302–316.

https://ejournal.unesa.ac.id/index.php/jurnal- Pendidikan-kewarganegaraa/article/view/3721%0Ahttps://ejournal.unesa.ac.id%0Awww.menlh.go.id/langit- blue-

Purnamasari, LS, Antariksa, & Suryasari, N. (2010). Spatial Patterns in Colonial Period Residential Houses in South Dalem Malang. *E-Journal Architecture , 3* (1), 40–53.

Ronarizkia, A., Wulandari, LD, & Yusran, YA (2021). The effect of the furniture industry towards the layout pattern of business house space in the Jorongan Village, Probolinggo. *ARTEKS: Journal of Architectural Engineering* , *6* (2), 235–248. https://doi.org/10.30822/arteks.v6i2.701

Shah, M. M., et al. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 1, Page: 276-286.

Silas, J., & Setiawan, W. (2000). *Productive Homes in Traditional and Empowerment Dimensions. Housing and Settlement Laboratory, FTSP ITS Department, ITS Publishing UPT. First Edition. Surabaya* .

Tutuko, P. (2008). Productive Home Settlement and Its Development. *Productive Home Settlement and Its Development* , *January* .

https://www.researchgate.net/publication/202719359_Permukiman_Rumah_Produktif_dan_Perkembangannya#fullTextFileContent

Ulfa, SM, Antariksa, & Ema Yunita, T. (2011). Spatial Patterns in Ancient Residential Houses in Bakung Village, Udanawu District, Blitar. *Soegijapranata, Indonesian Catholic University, Association of Architects , 9* .