



Transformation of Settlement caused by Housing Development in Suburbs of Semarang

Nur Muladica^{1, a)}, Titien Woro Murtini^{2, b)}, and Atiek Suprapti^{3, c)}

¹ Master Student of the Department of Architecture, Faculty of Engineering
Diponegoro University, Indonesia

^{2,3} Lecturer of the Department of Architecture, Faculty of Engineering
Diponegoro University, Indonesia

^{a)} Corresponding author: nurmuladica90@gmail.com

^{b)} titien_wm@yahoo.com

^{c)} atiekbudiarto@gmail.com

Abstract. The development of the region towards the outskirts of the city has become a common phenomenon of cities in Indonesia. The area that was formerly a deserted area is now a sought-after area of urban society. This is due to limited land in the city center causing the start of the spread of occupancy in the suburbs. The development of suburban areas that will undergo a transition causes a change of space in the region. This phenomenon can be found in the city of Semarang. One of them is the district of Mijen Semarang. The area that was formerly a small settlement with the potential of rubber forest farming has changed into one of the elite areas in the city of Semarang. The emergence of housing Bukit Semarang Baru (BSB) as a catalyst has a great impact on the development of the surrounding environment. Bukit Semarang Baru (BSB) in Mijen District, Semarang City is a new city concept housing that provides housing, education, industry, recreation and other commercial facilities. The transfer of land from rubber plantation to BSB housing is estimated to cause the transformation of space related to the function and land use in the surrounding settlements, especially the area directly adjacent to the village of Wonolopo. This research uses a rationalistic approach with qualitative paradigm, which in this study aims to understand and know the pattern of settlement transformation in settlements that occur in the village Wonolopo, Mijen, Semarang. Through this research is expected to be able to analyze and know how big the change of settlement space

Keyword : Transformation, Settlement, Housing

The development of housing and settlements is influenced by the existence of the surrounding environment. This in itself will form the function of residential space in accordance with the environment. In Indonesia, housing needs continue to increase as the population increases. Urbanization in the region grows rapidly resulting in serious environmental problems in areas experiencing high levels of urbanization, development, industrialization, and the exploitation of natural resources. This is a challenge for the government to positively strive for more equitable growth and regional development.

The emergence of new housing areas in the suburbs has an impact on the emergence of changes in space in the surrounding residential areas. According to [1] which states that the suburb (urban fringe) is an area that is in a

process of transition from rural to urban. The development of suburban areas caused the area to become an urban peri-urban area. The urban peri-urban area is a region or region that undergo a functional shift so as to cause the transformation of space in the region.

Currently, in the city of Semarang as one of the major cities in the province of Central Java is experiencing problems related to the amount of land available in the city center. Increasingly and rapidly increasing development has made the available land more limited. Therefore, now the private sector and the government began to divert development to the suburbs. In addition, the city center area does not occur higher density but also efforts to equitable development include residential, infrastructure facilities and infrastructure of the city. Residential areas that tend to lead to the east (Pedurungan) and the south (Banyumanik and Tembalang) are now beginning to rise to the west (Ngaliyan, Tugu and Mijen). One of the suburbs of Semarang, which has experienced the development of land function in the peri peri urban area and land conversion, is the Mijen Semarang area.

Bukit Semarang Baru Housing (BSB) is a catalyst that influences the surrounding environment. Wonolopo village, Mijen is an area with the most visible changes from tangible and intangible aspects. This is because this area is directly adjacent to the BSB housing. According to data from Mijen sub-district in 2017 figures, Wonolopo village became the village with the biggest change of land built from 2011 until 2016 is 164.3 ha [3]

Position of the village Wonolopo and surrounding areas allegedly will experience high growth saw in the northern coastal city of Semarang is sinking. Its location in the highlands becomes an opportunity for the government or the private sector to develop new settlements in the city of Semarang. The development of the suburbs makes the area functional. Changes in the function that causes the transformation of space in the surrounding settlement conditions. The construction of new housing as happened in BSB can be interpreted as an environmental change, in which the people around who are familiar with the previous environment, then have to adjust to the condition of their new environment at this time. So that raises the research problem that is Transformation of settlement space in kel. Wonolopo, Mijen caused by housing development of Semarang BSB

So it is necessary to do deeper research on space function changes that occur in settlements in the village of Wonolopo, Mijen, Semarang. This research is a further research deeper than the previous research, "The Effect of BSB Housing Development on the Physical Social Economy of the surrounding Community".[4] The difference from previous research, this study focuses on changes in the settlement space. As a reference material in analyzing this research, the researcher takes reference from previous research, is "The transformation of settlement and Spatial Housing in Kandri Tourism Village" which focuses on the same thing, the settlement space. [5]

Housing and Human Settlement

Human Settlement is a place for living and living for human groups. The part of the settlement called the container is a blend of three elements: nature (land, water, air), shell and network, while the content is human and society [6]. According to UU No. 1 of 2011 on housing and settlement. Housing and settlement area is a unified system consisting of coaching, housing, settlement area, maintenance and repair, prevention and quality improvement to slum housing, land supply, financing and financing system, and community role.

According to [7] states that settlements can be seen as a cultural landscape (cultural landscape feature), especially traditional settlements whose physical form is very much related to culture. As a form of adaptation, these architectural changes will represent the cultural conditions of the time, which, when coupled, will be able to tell the history of a culture.

Spatial Transformation

Transformation is basically a change or shift in function from village to city. The transformation phenomenon that occurs in the urban fringe region is the impact of urban development (urban sprawl) so that the goal for the population of origin and local, and it makes a region or region will undergo changes.

Spatial transformation includes spatial space / spatial changes as well as transformation of building function and transformation of building density. In addition, the development of communities affecting the pattern of settlement transformation is also influenced by the needs and economic growth of these settlements. [8]

Urban Sprawl

A suburban area (urban fringe) is an area that is in a process of transition from rural to urban areas. The development of suburban areas causes the area to become an urban peri-urban area. The urban peri-urban area is a region or region undergoing a functional shift resulting in spatial transformation in the peri-urban area. {9}

Urban sprawl is a process of physical appearance of urban outwardness to the outside. Uncontrolled urban development of a city or its urban area that takes the suburbs or rural areas around it. [10]

Here we provide some basic advice for formatting your mathematics, but we do not attempt to define detailed styles or specifications for mathematical typesetting. You should use the standard styles, symbols, and conventions for the field/discipline you are writing about.

METHODS

In this research, the method used is rationalistic method with qualitative approach. Qualitative approach is an approach that will generate descriptive data in the form of written or oral words of the people and behavior observed, supported by literature study based on the deep study of the literature in the form of data so that reality can be understood well. [11]

This type of research is a case study. According to [12] case study is an empirical inquiry that investigates phenomena in a real-life context, when the boundaries between phenomena and context are not visibly or clearly apparent and use multiple sources. The research data can be sourced form direct observation to the field and interviews. Interviews were conducted with relevant government agencies and residents in the Wonolopo village, Mijen

RESULT AND DISCUSSION

In this study, the limitation of regional scope is limited to one urban village in Mijen sub-districts, Semarang is Wonolopo village as show in figure 1. It is based, because it is the closest sub-districts and directly adjacent to the housing BSB City. Area of Wonolopo village 493.35 Hectares with Longitude coordinates: 110.31175 and Latitude coordinates: -7.04963. The administrative boundaries of the Wonolopo village is:

- North : Ngadirgo Village
- South : Jatisari urban village
- West : Wonoplumbon village
- East : Mijen urban village

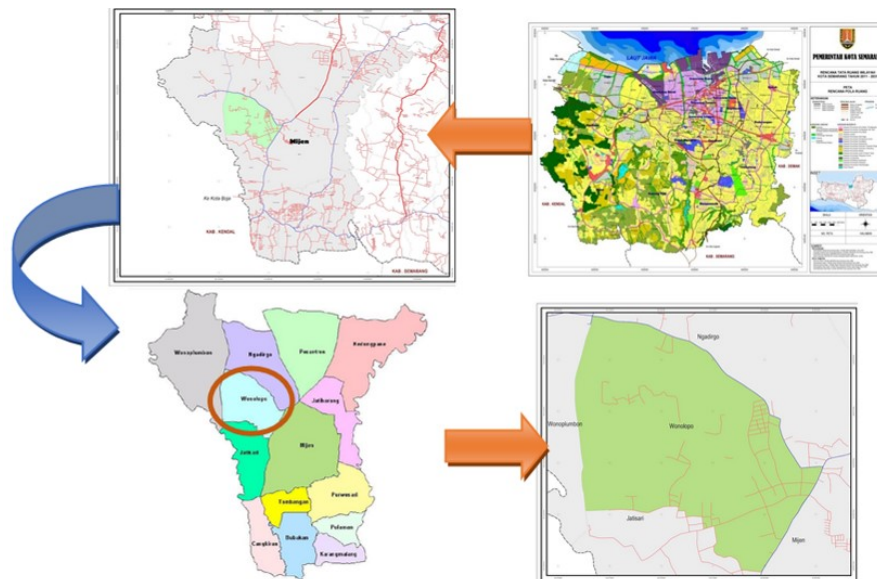


FIGURE 1. The scope of research in the village, wonolopo, Mijen, Semarang city

Housing in the Settlement

Settlements in the Wonolopo village have different characteristics than the other district. In this urban village has some developing housing that is intended for middle and upper class as shown in figure 2, there are 6 planned housing in Wonolopo village. The existence of such housing shows the potential of residential as an investment opportunity for private and government.

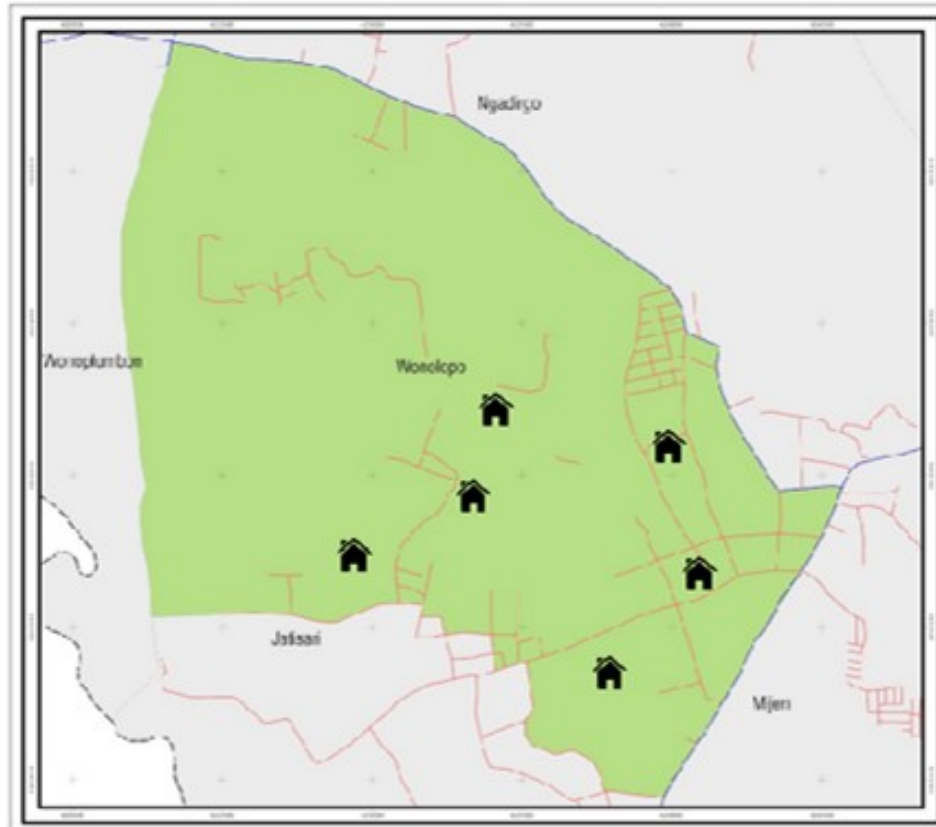


FIGURE 2. Distribution of Housing in the village, Wonolopo, Mijen, Semarang city

The existence of new housing that appears in the village Wonolopo not apart from the emergence of large housing that is housing BSB City Semarang. The housing BSB City is located in ngadirgo village (Figure 3) which directly border with Wonolopo village. This housing is different with the village Wonolopo but directly adjacent to the village Wonolopo. Because housing BSB City is one of the largest housing in Semarang city and its largest scope in Mijen sub-district, so the impact is felt in the sub-districts within Mijen sub-district. For the Wonolopo urban village, the infrastructure and economic aspects of the economy are perceived to affect the social, economic and environmental aspects

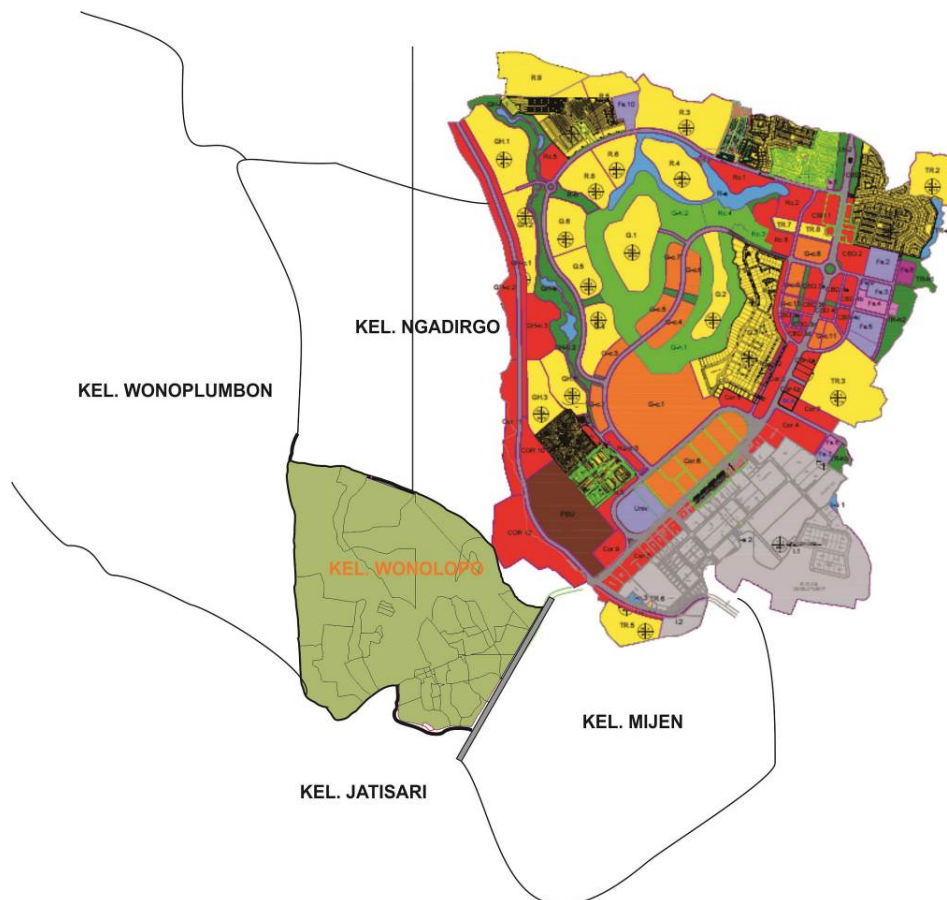


FIGURE 3. Location of the village, Wonolopo to BSB City Semarang in Mijen district

The enormous housing scope of BSB city forms a new city containing self-service facilities without being dependent on the surrounding neighborhoods. Regardless of the positive or negative impact of housing BSB City grew and developed into the largest housing in Central Java. In addition to encouraging other new keil houses, making Mijen sub-district, especially Wonolopo village into an urban fringe that undergoes a process of transition from village to city.

Land Use

Transformation in Environmental Characteristics

Changes in physical environmental characteristics of Wonolopo urban village settlements are indicated by improving the quality of road networks, improving the quality of housing, improving the quality of settlements, and improving the quality of permanent buildings. Improving the quality of the road network is shown on the main road connecting Mijen with the city of Semarang

Building characteristics

Wonolopo village, Mijen is an area with rapid growth of commercial space. In accordance with its characteristics, there is an increase in the quality of occupancy and the permanent quality of the building as shown in figure 4, the houses has been using bricks as wall.



FIGURE 4. Characteristic of house in the Wonolopo village

Improvement of the quality of buildings visible on building materials and design of the dwelling in the village of Wonolopo. Nearly 90% of the building material has been using bricks as a home-insulating and precarious wall as the roof of the house. Keep in mind beforehand, home living in the village Wonolopo using wooden walls or bamboo seal as show in figure 5. People in the sub-district of Wonolopo in large part have used new building materials to adjust the current technological developments and the weather conditions in Semarang city in general.



FIGURE 5. Wooden house in the Wonolopo village

Function of Building Space

In addition, the form of residential space that has changed the function of residence into commercial space. This can be seen in the main corridor of the Mijen-Wonolopo road as shown in figure 6, which that corridor there is a houses are still the same as their functions, but there are also those that have changed their functions to commercial.

the residence located on the main Mijen road corridor and the local commercial road corridor, such as front of residential complex, city park and other public facilities

The growth of settlements spread in locations with high levels of crowds up to in areas in the low level of crowd. Settlements in the village of Wonolopo, Mijen has characteristics

Planned Settlements

These settlements grow and flourish on the basis of potential areas that can be used as residence in the area, especially in Wonolopo village. Such planned settlements include housing or small clusters as shown in figure 8 that consisting of residential houses and their pre-built facilities.

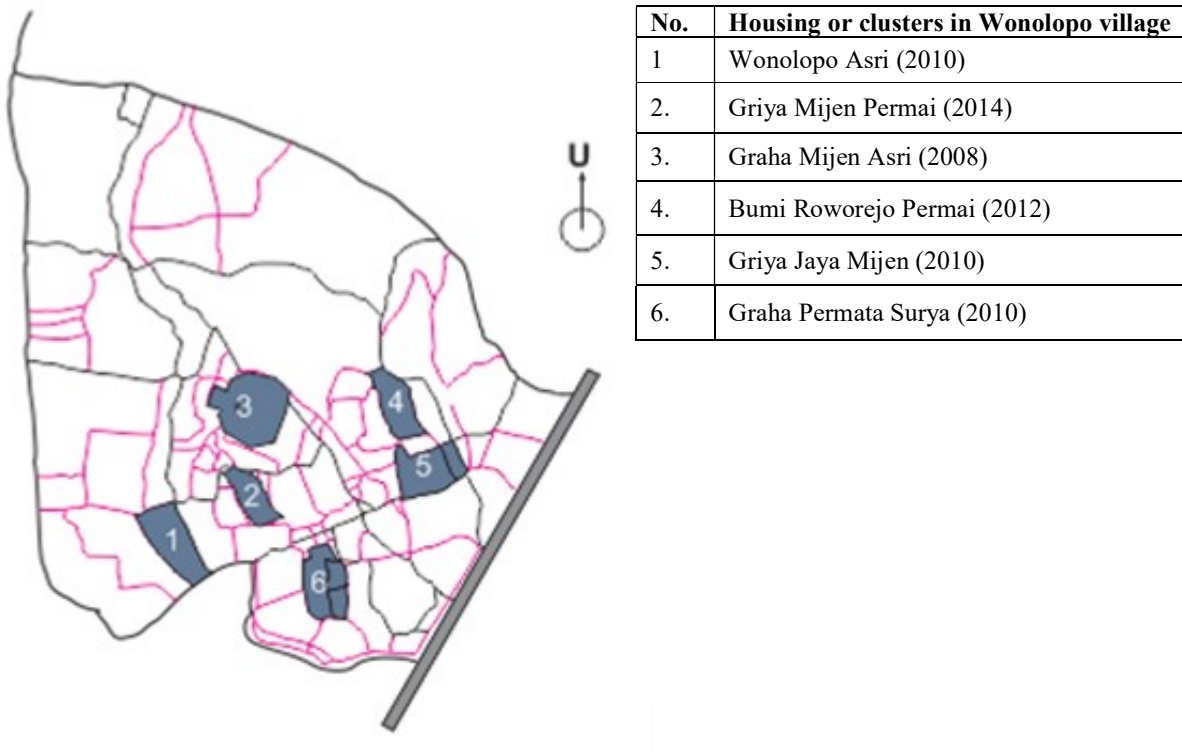


FIGURE 8. Distribution of planned settlement in the Wonolopo village

The planned exposure of settlements in the Wonolopo sub-district tends to be more on site with the main road of Mijen-Semarang. This is as an effort of the developers so that the planned housing location can be easily accessed by people. Although the Wonolopo region is becoming an emerging area, housing planning in the region is still directed in areas with the highest potential opportunities.

Unplanned Settlements

This settlement grows and develops in line with the development of Wonolopo urban area as show in figure 9 there are dissemination of unplanned settlements is more widespread in all places. The existing settlements as a forerunner will follow the development of surrounding settlements. They grow and develop as well as planned settlements because they see the potential but untuj infrastructure facilities in the vicinity not well prepared. So to meet the needs of the surrounding will follow the situation and conditions later.

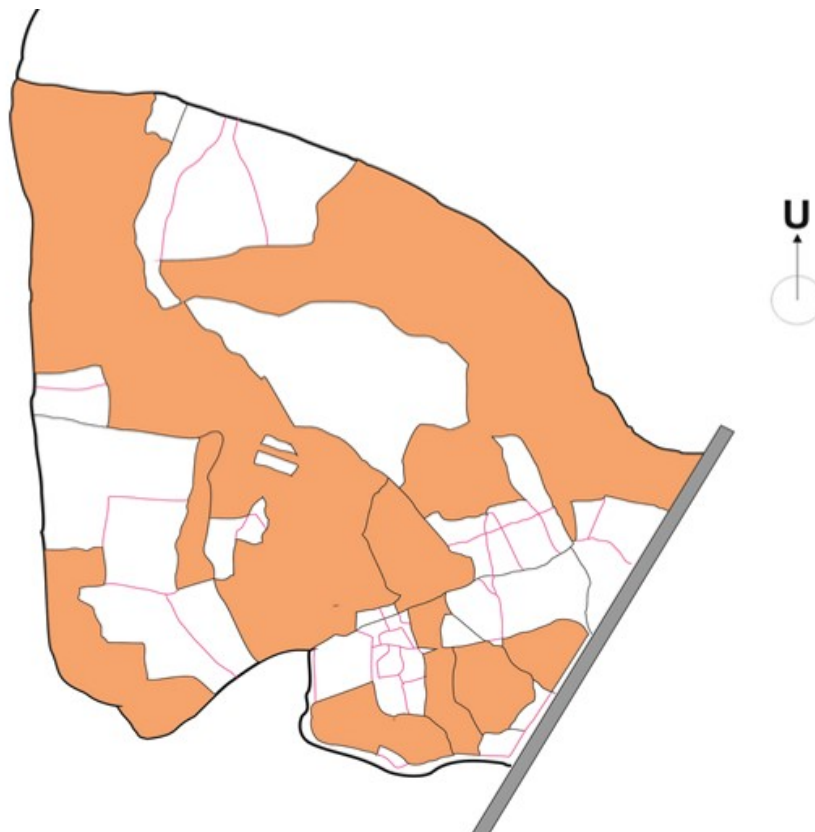


FIGURE 9. Distribution of unplanned settlement in the Wonolopo village

The original settlements grown in the village Wonolopo until now the majority more. Despite the renovation or upgrading of houses in terms of building materials, the settlements continue to grow among the new settlements.

Transformation Cultural and Social

Change (transition) in the village Wonolopo not only in terms of land use, shelter, environment, and economy. But also on social and cultural change.

Change is an adaptation to new demands for the culture to survive. Thus there are parts that still exist and become a strong feature of the culture and there are parts that change to adjust the development of the times (continuity and change).

In the Wonolopo cultural and social sub-districts are the interplaying aspects. People's lifestyles slowly began to turn more urban than their previous (traditional) rural lifestyle. Migration is the main factor affecting the change. The habits and lifestyles of urban people who migrate to Wonolopo village by themselves encourage indigenous people in their environment to participate in lifestyle that is almost the same.

CONCLUSIONS

Can be seen in the village of Wonolopo settlement change begins with the emergence of housing BSB City Semarang in Mijen district. This triggered the growth of new housing called settlements. The planned settlements also changed the development of surrounding settlements, including infrastructure, shelter, infrastructure facilities.

In addition, the change of occupancy that functions as a residence becomes a commercial function. This change occurred in a settlement called unplanned settlements.

The emergence of planned settlements and unplanned settlements as a result of changes in residential spaces in the urban fringe.

REFERENCES

- [1] Giyarsih, Sri Rum. 2010. Pola Spasial Transformation Wilayah di Koridor Yogyakarta-Surakarta. Forum Geografi, Vol 24 No.1, Juli 2010:28-38.
- [2] Attoe, Wayne, Donn Logan.1989. American Urban Architecture: Catalysts in the Design of Cities. University of California. Press: Berkeley and LA
- [3] Badan Pusat Statistik kota Semarang. 2016. Statistik Daerah Kota Semarang 2016. Semarang.
- [4] Sukarsa, Rivian. Iwan Rudiarto 2014. Pengaruh Pembangunan Bukit Semarang Baru terhadap Sosial Ekonomi fisik lingkungan Masyarakat sekitarnya. Jurnal Pembangunan Wilayah dan Kota; Vol. 3; No. 1; 2014; hal. 209-219
- [5] Ernadia, Loretta. 2017. Perubahan Lingkungan dan Tata Ruang Rumah Tinggal di Desa Wisata Kandri. Tesa Arsitektur Volume 15 | Nomor 1 | 2017
- [6] Doxiadis, 1968, Ecology and Ekistics, Elex : California. Fikadiana,
- [7] Rapoport, Amos, 1977, Human Aspects of Urban Form, Towards A Man Environment Approach to Urban Form and Design, Oxford, USA
- [8] Kostof, Spiro.1991. The City Shaped: Urban Patterns and Meanings Through History. Bulfinch Press / Little Brown and Company, Boston, MA
- [9] Giyarsih, Sri Rum. 2010. Pola Spasial Transformation Wilayah di Koridor Yogyakarta-Surakarta. Forum Geografi, Vol 24 No.1, Juli 2010:28-38
- [10] Yunus, Hadi Sabari. 2008. Dinamika Area Peri Urban: Faktor Penentu Masa Depan Kota. Yogyakarta: Pustaka Pelajar
- [11] Moleong, Lexy. 2007. Metodologi Penelitian Kualitatif. Bandung: Remaja Karya.
- [12] Yin, Robert K. 2011. Studi Kasus: Desain dan Metode. Rajagrafindo Persada. Jakarta