**Conference** Paper



# The Role of Local Wisdom Values in Realizing the Concept of Building Planning and Environment in Gresik

Syaifuddin Zuhri \*, Imam Ghozali, Linggarkalbuadhi B. Lukito

Department of Architecture, Universitas Pembangunan Nasional "Veteran" Jawa Timur, Surabaya 60294, Indonesia

\*Corresponding author: E-mail: syaifuddin.zuhri@upnjatim.ac.id

### ABSTRACT

Gresik has a wealth of architectural buildings as historical buildings that are very diverse and spread in almost all areas of the city because the potential of the historic building can be to strengthen local identity. On the other, currently the growth of urban buildings in the Gresik area still only prioritizes functional needs, especially commercial buildings or buildings that have economic potential, especially those located on the main roads of Gresik. The visual growth of these buildings does not take into account the values of local wisdom that can characterize the appearance of local buildings, and even now many are neglected and are not even a major consideration in the current city's visual design thinking. The symbolization of the city must of course be a guide in regulating the visual growth of the city, it can develop according to the architectural potential of the old city which can be expressed in the design of the building or environment. The author's thought in this study is how is the role of local wisdom values as a source of approach in regulating visual design guidelines for building layouts and the local environment, especially in commercial buildings which have been growing quite rapidly. The research uses the descriptive analysis method through observation and literature study in an effort to solve research problems that arise in the field. The preparation of the design process uses an iconic approach to get the visual characteristics of the city that are expressed in buildings. The visual potentials of the city originating from old buildings can be input in the design process and make these potentials as markers of a place or environment in an effort to create the characteristics of a place or environment.

Keywords: Identity, building, guidelines, historic, symbol

### Introduction

Gresik is an area rich in culture and historical heritage, this city is one of the district cities in East Java that is famous as a religious city and is dubbed the 'city of guardians' because there are two tombs of Wali Songo figures and the tombs of those who spread other Islamic teachings. So Gresik Regency needs to be able to explore and utilize the potential or character of the region so that it can improve itself and develop the local tourism segment, especially to visually beautify the diversity of Islamic culture and the face of architectural buildings and settlements in the area by local wisdom (Behrens-Abouseif, 1999). Gresik is one of the coastal cities on the island of Java which is full of historical heritage. The coastal area is an area that is vulnerable to change, be it physical, social, or cultural changes. This happens because of the "interaction" of various interests that are embodied in one common activity space.

Visualization of Building and Environmental Planning is useful for controlling the use of space and creating an orderly, sustainable, quality environment as well as increasing the vitality of the economy and people's lives. Space and environment are very necessary to uphold the identity of

How to cite:

Zuhri, S., Ghozali, I., & Lukito, L. B. (2023). The role of local wisdom values in realizing the concept of building planning and environment in Gresik. *7st International Seminar of Research Month 2022*. NST Proceedings. pages 7-13. doi: 10.11594/nstp.2023.3302

the environment, the character of the Islamic religion that grows and develops at the roots of local culture greatly affects the visual application of space, environment, and buildings. This needs to get the attention of the designers to produce a basic reference for the development of a strong Islamic space (Critchlow, 1976). The practice of Faith, Islam, and Ihsan in every Muslim person will affect moral behavior which will affect the character of the accommodation of space (Enifah, 2012).

Environmental conditions that have visual diversity, such as residential buildings have strong characteristics that distinguish them from the surrounding environment, especially in the architecture of people's houses and public architecture which have been influenced by modern styles. These characters will give an interesting and unique impression with the form of ornaments that have different characteristics of Chinese and European and Arabic architecture according to the economic, social, cultural levels that occurred among the people at that time.

The visual diversity of historical buildings in Gresik is a visual potential that can be a source of ideas in the development of building art in the local community, although currently, the development of modern buildings dominates the development of local buildings. Due to the lack of understanding of the local community understand the importance of the conservation of historic buildings, the visual development of local buildings can shift, this can also be due to the absence of references in regulating the visual development of buildings and the local environment, causing the shape of local buildings to become uncontrollable or the diversity of visual forms to be uncertain. direction (Field, 1998), even the visual characters are not firmly rooted in the character of their locality (Tika, 2014).

The visual conditions of the building and the environment are still not comfortable because the spatial arrangement still does not accommodate the needs of pedestrians more freely, the presence of shade or trees, even safety for pedestrians, and the robustness of the building cannot be seen visually. Then the aspect of beauty that has not described the visual unity of the building, or the visual of the building still has a variety of forms that are not directed or unified.

It is even said that the identity of the city can be formed based on the architectural style of the building, its function, and role in the urban system, the socio-cultural values that live in the community (Zuhri et al., 2017), other aspect of welfare that color the spirit and behavior of the community, even flora and fauna that can display special characteristics and become pride. community (Budihardjo, 1997). The development of the visual development design of buildings and the environment will provide direction for the local government in guiding the visual development of buildings that continue to grow, and this is so that the visual form of local architectural buildings and the environment with local characters or local architecture (Bouaissa, 2013), even the visual development of local buildings does not develop haphazardly and out of the identity of the local community (Hankin, 1925).

### **Material and Methods**

The research method is carried out in stages with descriptive-qualitative analysis by conducting visual data collection of local historic buildings through primary and secondary data to obtain architectural visual forms that have dominant forms. These data are formulated architecturally so that they can be used as precedent data that can be visualized as basic data in the development of design concepts (Bollini, 2012). To realize the visualization of architectural forms that can be applied to building layouts and the environment, the iconic approach method is used which is an architectural process that makes markers as a visualization of the appearance of the building so that it is easily recognized and remembered. This iconic approach is an approach in the process of designing forms through an empirical process and spatial habits that are carried out based on the potential of local architecture.

This iconic approach is expected to create the character and image of the local building so that the building has a characteristic, easily recognizable by the public while still paying attention to the 3 (three) main elements that make up the architecture, namely comfort (comfortability),

strength (constructibility), and beauty (aesthetics) of building or environment (Ujianto, 2012). The Visual Building and Environmental Design approach based on the potential of local historic buildings can be interpreted as a symbol of local culture that has grown (Putri & Suryo, 2022), and developed at a certain time and area, and is a characteristic that is inherent in the activities and behavior of the local community (Stratil, 2014).

This research was conducted in a village area that has a fairly rapid development, and this area is surrounded by areas that have a lot of potential historical heritage (Figure 1).



Figure 1. Village administrative area

This research was developed in one study area at the street corridor namely Dr. Soetomo Road. This street is a road corridor that has experienced rapid and varied growth in the visual form of buildings (Figure 2).

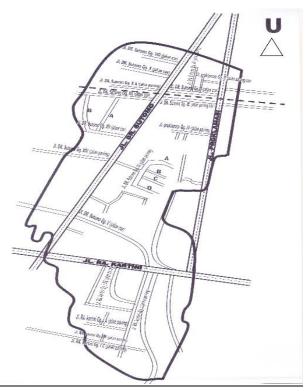


Figure 2. Development area

# Results and Discussion The potential of visual forms

Many historical heritage buildings in the city of Gresik have distinctive architecture, such as the Lodewijk Fort, the Sunan Giri Palace, and the Kampoeng Kemasan building. The shape of these buildings cannot be separated from the influence of Chinese, European, or Arab traders who carried out the trade at that time.

The shape of these buildings cannot be separated from the influence of Chinese, European, or Arab traders who carried out the trade at that time. As a result of trade interactions at that time, it had an impact on the interaction of people who settled and even married in Gresik. To form a residence that is nuanced in the type of building according to the origin of the traders.



Figure 3. Facade typology of the local historic buildings

The architectural forms and motifs of local buildings have unique forms where these forms get a lot of Chinese, European, and Arabic cultural touches. With the characteristic of having the same number of large windows in a multi-story building and the presence of sturdy pillars. As well as the presence of air vents or holes with ornamental plant curls with tendrils to form a symbol.



Figure 4. Motif & structure elements in façade

The ornament and motif of elements found on the facade of the building are in the form of motifs and decorations found on each building facade on the geveltoppen, gevel, acroteric nok, lisplank, doors, windows, walls, pillars (columns), bouvenlicht or floors.

## **Comfortability review**

Strengthening the external environment of the building is also carried out by providing sidewalks as a function of pedestrian activities by providing elements of vegetation arrangement, lighting, and aesthetic elements as guides. In planning, pedestrian paths also consider paths for people with disabilities so that they can provide direction in crossing pedestrian paths.

The affirmation of the corridor is strengthened by presenting accents and elements on the sidewalk and existing artificial elements. This is done to emphasize the direction or accessibility of the road in addition to having a function as a shade or element to beautify the space. The arrangement of vegetation as a shade element increases pedestrian comfort when tracing the sidewalk in front of commercial buildings arranged with several other exterior elements to create a better atmosphere.



Figure 5. Pedestrian pavement review

To support the convenience of environmental accessibility, a circulation pattern was developed that is used in the planned area by using one-way movement due to the dense circulation of vehicles in this area and avoiding the flow of back-and-forth vehicle movements. And optimize the pedestrian path system so that it can meet the needs of pedestrians and provide comfort and safety.

### Constructibility review

Expression of the appearance of the form of the building adopts certain motifs that are symbols of historical buildings, such as the use of motifs and compositions in the shape of doors and windows. The use of local visual forms such as the arrangement of windows of the same size and number, as well as the use of sturdy pillars with the addition of ornamental motifs in the form of plant tendrils.



Figure 6. Element column

The visual arrangement of the building is emphasized using iconic elements of local buildings arranged by the unity of the building to emphasize the dominant impression and local values presented. The use of doric columns in the facade is presented to increase the structural dominance of the building to present the monumental impression of the building.

### Aesthetics review

The visual arrangement of the building emphasizes the use of iconic local building elements arranged on the building's facade according to its character as a commercial building. Many forms of decoration are present to strengthen the character of the locality in the area, as well as to emphasize the solid impression and unity of the building. The affirmation of the corridor is strengthened by presenting accents and elements on the sidewalk and existing artificial elements. This is done to emphasize the direction or accessibility of the road in addition to having a function as a shade or an element to beautify the space.



Figure 7. Composition of buildings and environment

The strategy of structuring the shape and structure of the building mass is to create the character and identity of the city with the relationship between the existing building masses. The strategy for structuring the shape and mass of buildings in commercial buildings is to optimize the use of symbolic artistic decoration elements to improve the environmental quality of the area. Such as the use of curved brick rollag arranged in a symmetrical pattern, and located above the door or window with the dominance of brick red color or column arrangement with the doric-style in front wall (facade) to give a solid, monumental, and magnificent impression to the building.

### Conclusion

From the above study, it can be concluded that the study area is still not optimal as an area that can preserve old buildings, or as a source of ideas and ideas to create spaces and environments that have local characteristics, even though many historical potentials can be optimized for their role to support synergistic development of the area as a cultural area. And the need for direction on aspects of building planning includes several aspects above, especially for buildings along the main corridor with priority for commercial buildings which are considered to have quite rapid growth.

The need to clarify and emphasize the character of the existing building based on the typology of its function as a commercial building that must be attractive and have local characteristics. This can be done by strengthening and adding symbolic elements or decorations that symbolize local characteristics so that the building or environment can become a more informative and distinctive marker of building identity.

It is important to emphasize the hierarchy based on road function by affirming the width of the sidewalk for more comfortable and safe pedestrians, as well as confirming circulation and movement patterns through the placement of road elements such as vegetation for shade and greenery.

### Acknowledgment

This work was financially supported by Lembaga Penelitian dan Pengabdian Masyarakat (LPPM) UPN "Veteran" Jawa Timur with grant scheme Pikat at Penelitian Mandiri UPN 2022. Therefore, we are grateful for this funding and support of this research. And we hope that the results of this community service will have a positive impact on the community and other research colleagues to develop further on a larger scale of research.

#### References

Behrens-Abouseif, D., (1999). Beauty in Arabic culture. Markus Wiener. pp. 7-8.

Bollini, L., (2012), Hybrid methodology for social & digital space design: user experience and interaction models design based on human science and user-centered, *Proceeding 4th Internacional Forum of Design as A Process*.

Bouaissa, M. (2013). The crucial role of geometry in Islamic Art. Al Arte Magazine.

Budihardjo, E. (1997). Pendekatan sistem dalam tata ruang dan pembangunan daerah untuk meningkatkan ketahanan Nasional. Universitas Gadjah Mada, Yogyakarta.

Critchlow, K. (1976). Islamic Patterns: An analytical and cosmological approach. Thames and Hudson.

Enifah, E. (2012). Strategi peningkatan kualitas Sumber Daya Manusia (SDM) sebagai upaya memaksimalkan produktivitas perusahaan. *Skripsi*. Semarang: Institut Agama Islam Negeri Walisongo.

Field, R. (1998). Geometric patterns from Islamic Art & Architecture. Tarquin Publications.

Hankin, E. H., (1925). *The drawing of geometric patterns in Saracenic Art.* Memoirs of the Archaeological Survey of India No. 15. Government of India Central Publication Branch.

Putri H. P., & Suryo T. H., (2022), The role of local wisdom values for achieving healthy housing concept in humid tropical climate. *Local Wisdom Jurnal*, 14(1), 1-5. https://doi.org/10.26905/lw.v14i2.6774

Stratil, J. (2014). Hybrid design methods for compleks systems in architecture and structural engineering, *Proceeding 11th World Congress on Computational Mechanics (WCCM XI).* 

Tika, H. M. P. (2014), Budaya meruang dan peningkatan kinerja visual bangunan. PT. Bumi Aksara, Jakarta.

Ujianto, P. (2012). Perkembangan 'Arsitektur ikonik' di berbagai belahan dunia. Majalah Ilmiah TRI-DHARMA.

Zuhri, S., Imam G., & Heru S., (2017), Optimization of Space Utilization in Penjaringansari Flats Surabaya, Proceeding in International Seminar of Research Month: Science and Technology in Publication, Implementation and Commercalization 2017.