

IMPLEMENTATION OF RELIABILITY BUILDINGS BASED ON HEALTH PRINCIPLES

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Abstract. Heritage Buildings Cultural heritage, which is generally more than 50 years old, is a material cultural heritage. This cultural heritage building has essential value for history, science, education, religion, and culture, so that its existence needs to be preserved. Preservation of cultural heritage buildings, of course, must pay attention to health requirements because health is the right of every person guaranteed by law. Requirements for cultural heritage buildings include ventilation systems, lighting, and sanitation, and the use of materials thereof. This paper aims to describe and analyze the implementation of cultural heritage buildings' reliability based on health principles, using research methods with an empirical juridical approach with qualitative analysis. The research location is in the Kota Lama area in the city of Semarang. Data sources consist of primary and secondary data. Based on the findings and analysis, there are many buildings in the Kota Lama area in Semarang that have been revitalized for their preservation. However, because many buildings in Kota Lama are still owned individually, for that with principles of health, it is necessary to conduct periodic reviews, care for and maintain as an effort to preserve cultural heritage buildings as regulated in Articles 8 paragraph 3 of PUPR Ministerial Regulation No: 01/PRT/M/2015 concerning the maintained Cultural Heritage Building. This is necessary so that the preservation of cultural heritage buildings can be achieved and beneficial to the community.

Keywords: Building; Cultural Heritage; Implementation; Health; Principles.

I. Introduction

Indonesian culture as a reflection of the nation's noble values must be preserved because it helps strengthen the national identity and strengthen the bonds of a sense of unity and unity to realize the nation's aspirations in the future. Therefore, the Indonesian government is obliged to promote culture as a whole for the people's greatest prosperity following the mandate of Article 32 paragraph (1) of the 1945 Constitution of the Republic of Indonesia. So, the Indonesian people's work, both in the past, present, and will come, can be used and valuable as development capital.

One of the cultural heritages is material in the form of cultural heritage buildings. Cultural heritage buildings in an area are a reflection of how the area has experienced changing times. Heryanto argues that a cultural heritage building is like a sentence in a book that can tell the history of a city's growth and development (Heryanto, 2011: 21). Therefore, its management and preservation are needed so that the existing cultural heritage buildings are maintained because they have essential values and can remind the city's current history. The management and conservation of cultural heritage buildings are regulated in Article 1, number 1 of Law No. 11 of 2010 on Cultural Heritage.

The Kota Lama area in Semarang is a historic area because it was the center of government, business, and European settlements during the Dutch colonial era and is often referred to as "Little Netherland." This area after independence was still used as a business area, but over time people increasingly abandoned the Kota Lama area; this was due to increasingly unfavorable environmental conditions. (Widiastuti. 2014). However, in 2015 UNESCO designated the Kota Lama of Semarang as a port center city with a unique urban landscape at its time with a tentative world heritage site (Werdingasih, 2017). The UNESCO designation opens an excellent opportunity for the Kota Lama Semarang area to become a Semarang tourist area. Due to the rarity and historical value of the Kota Lama area with colonial-style buildings, tourists are expected to be a unique attraction. One of them is the Berok Bridge, which is a bridge that connects Jalan Letjen Suprpto with Jalan Pemuda. This bridge has the potential to be developed as the main gateway to the Kota Lama area. Besides that, the Kota Lama area also has the potential to be the image of Semarang. It is considered so because the Kota Lama area was the embryo of Semarang city in the past.

Therefore, to increase this potential, it is necessary to increase maintenance or conservation. This preservation and maintenance are essential considering that generally, buildings designated as cultural heritage, such as those in the Kota Lama of Semarang City, have an age of more than 50 years so that these buildings are fragile, unique, rare, limited, and not renewable. Conservation of historical areas included in tourism icons can be a source of income for the community and local government.

However, preservation or conservation efforts need to pay attention to the balance between academic, ideological, and economic interests. Besides, preserving cultural heritage buildings must also pay attention to technical requirements related to the building's reliability. The reliability requirements of cultural heritage buildings consist of safety, health, comfort, and convenience. In particular, health regulation is a requirement for the reliability of cultural heritage buildings. This is because health is the right of every person guaranteed by law as regulated in Article 28H (1) of the 1945 Indonesian Constitution. It states that everyone has the right to live in physical and spiritual prosperity, live in, get a good and healthy living environment, and are entitled to health services. Also, in article 6 of Law no. 36 of 2009 concerning Health, it is stated that everyone has the right to a healthy environment for the attainment of a health degree. Likewise, what is regulated in Article 8 paragraph 3 of the Regulation of the Minister of Ministry of Public Works and Public Housing of Republic of Indonesia No.1 of 2015; Health Requirements include ventilation systems, lighting, sanitation, and the use of materials must be able to ensure compliance with health requirements. The principle of healthy cultural heritage building aims to increase the building's benefits for users and the community.

About the reliability of cultural heritage buildings that must meet health requirements, it is not easy to achieve it; moreover, there are buildings in the Kota Lama Area owned by individuals. Besides that, many of the Kota Lama Area buildings are used as warehouses by their owners to give the impression of being slum and unkempt.

Based on this, the problem to be investigated is how to implement cultural heritage buildings' reliability based on health principles.

II. Research Method

This research is descriptive with empirical juridical research type. The data used is secondary data in primary, secondary, and tertiary legal materials obtained through literature and document studies to get actual and comprehensive data. Primary data is used through in-depth interviews to explore community participation in preserving cultural heritage

buildings located in the Kota Lama Kota Semarang to obtain reliable, reliable, and comprehensive data. This research's data analysis is interactive descriptive analysis; this analysis is used to get an overview of cultural heritage buildings' preservation efforts in the Kota Lama Area of Semarang City. The results can be used as a guideline for subsequent development. In conducting interactive descriptive analysis, the researcher moves between data collection and data presentation. Each stage of data collection is analyzed to identify those data deficiencies that can be identified immediately, and this analysis continues until the data collection stage is complete.

III. Discussion and Analysis

a. Reliability of Cultural heritage buildings

A building is a physical form of construction work integrated with its domicile, partly or wholly above or in the ground or water. It functions as a place for humans to carry out their activities, whether for housing or residence, religious activities, social activities, business activities, culture, and special activities. (Law No 28/2002). Meanwhile, what is meant by cultural heritage according to Law Number 11 of 2010 concerning Cultural Heritage is a built-in structure made of natural objects or human-made objects to meet the needs for walled and/or non-walled and roofed spaces. In the Regional Regulation of the City of Semarang Number 2 of 2020 concerning the Planning of the Old City Site Building and Environmental Site, Cultural Heritage Buildings are built structures made of natural or human-made objects to meet the needs walled and/or wall-less, and roofed spaces.

A building can be a cultural heritage if it has the characteristics as stipulated in article 5 of Law No.11 of 2010 concerning Cultural Heritage, namely: a. Are 50 years old or more, b. Representing the style period at least 50 years old, c. Has a special meaning for history, science, education, religion, and/or culture d. Has cultural values for strengthening the national personality. Whereas in Article 7, it is explained that Cultural Conservation Buildings can: a. Single or many elements; b. Stand free or unite with natural formations. Furthermore, according to Catanese & Snyder (1979) in Tungka (2015), states that an ancient building or a historic environment is worthy of being used as a cultural heritage if it has aesthetic values, greed, rarity, historical role, strengthening regional image, and superlatively (privilege).

Based on this, cultural heritage areas need to be protected. Activities to preserve cultural heritage areas are carried out by, among others: data collection and determination of cultural heritage buildings, inventory of ownership of cultural heritage buildings, legal protection of cultural heritage buildings, and control of legal violations (Widyawati & Syahbana, 2013). In the implementation of conservation of cultural heritage areas/facilities, particular actions must be taken in every handling (Burra Charter, 1999), including 1. Conservation, namely all maintenance activities of a place in such a way as to maintain its cultural value 2. Preservation is preserving materials and sites in existing conditions and slowing down weathering 3. Restoration / Rehabilitation is an effort to restore the physical condition to its original state by removing additional elements and replacing original components that have been lost without adding new parts 4. Reconstruction restores a place in its original form as it is known by using old or new materials and differentiated from restoration 5. Adaptation/Revitalization is any effort to change the place to be used for an appropriate function 6. Demolition is the destruction or renovation of a building that has already been used, damaged or harmful.

In essence, the conservation of cultural heritage buildings aims to improve the community's welfare in a just and equitable manner and provide added value for the community as social beings in leading a better life and livelihood.

Based on the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia Number 01/Prt/M/2015 concerning preserved cultural heritage buildings; Article 6 states that the technical requirements for preserved cultural heritage buildings include requirements for building layout, requirements for reliability of cultural heritage buildings, and preservation requirements. Furthermore, to meet the fairness requirements of a cultural heritage building that is functional and following the building structure, which is harmonious and in harmony with its environment, it must ensure the building's reliability in terms of safety, health, comfort, and convenience. In particular, health requirements in the reliability of cultural heritage buildings that must be considered are ventilation systems, lighting, sanitation, and materials to ensure compliance with health requirements. This is aimed at increasing the benefit of the building for users and the community.

The ventilation system is needed so that air circulation in the cultural heritage building plays a significant role in realizing a healthy structure. When breathing, humans can inhale other particles besides oxygen which may be substances that have contaminated the air. In addition to buildings that do not have ventilation, dirty air will only continue to rotate in the room. It will have a very negative impact on each user's respiratory system. The ventilation itself is defined as how the air in and out and the air exchange are used to maintain and regulate the air. The air needed must also be following the needs of the user to get comfort. This working principle is to create a process of air exchange that occurs due to pressure differences. The air will move from a place with high pressure to an area with low pressure; the vent itself can be in the form of doors, windows, vents, which are part of the temperature and humidity control system.

Lighting in buildings of cultural heritage must also be considered because light can affect all activities in it. The main lighting is light that comes from the sun. Besides, the light coming from lamps is also very important because lighting from lamps impacts vision and eye health, so it is necessary to adjust lighting according to the room's capacity and needs.

Furthermore, talking about sanitation, which is an effort made by humans to create and guarantee environmental conditions (primarily the physical environment, land, water, and air) that meet health requirements, as the opinion of asrul anwar; sanitation is a way of monitoring all forms of environmental factors may affect the degree of public health. Based on this, sanitation includes the processing or disposal of waste and household waste that is not correct and can be a source of bacteria and can cause other health problems. Not only that, improper disposal of garbage and trash will also cause unpleasant odors, which of course interfere with the sense of smell.

b. Implementation of Reliability Building for Cultural Heritage Based on Health Principles

Implementation of building reliability Cultural heritage buildings related to health principles involve a variety of things. Based on visual observations of the reliability of cultural heritage buildings in the old city area of Semarang, seen from the ventilation system and air circulation and lighting in one of the structures of cultural heritage buildings that have been restored and have met the reliability criteria of the building, such as a photo of one of the cultural heritage buildings below:



The Huis Monod Building (right), a relic of the Dutch colonial era, has been restored.



The sketch exhibition is one of the activities held at the Monod Huis building, Semarang.

Reliability in the field of ventilation, air circulation, and lighting of the cultural heritage building can be realized considering the building is a legacy of the Dutch Indies government, known to have many experts in architecture. Furthermore, related to the reliability of buildings in the sanitation sector, based on article 41 of the Semarang City Regulation Number 2 of 2020 concerning the Kota Lama Site Building and Environmental Planning Plan, this is carried out through a network system that includes domestic wastewater management which is carried out through a local domestic wastewater management system. About drainage is carried out using the Polder system, including retention ponds located in front of Tawang, Berok, and Bubakan Stations. The primary channels are Kali Semarang and Kali Baru. The government installed a water pump installation on the banks of the Semarang and Kali Baru rivers and water gates in the Tawang, Bubakan, Berok, and Kali Baru retention ponds to avoid flooding due to rain or high tide. As for solid waste, it is regulated according to existing regulations.

Based on the above, it can be concluded that the implementation of the reliability of cultural heritage buildings in the Semarang city area has been carried out well. Still, the local government requires continuous supervision considering that individuals own the ownership of existing buildings in the Kota Lama Area. These buildings are generally used as warehouses owned by entrepreneurs who are legal landowners in Kota Lama. The use of facilities for warehousing gives the impression of being slum and unsafe for the Kota Lama area.

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It is indeed ironic that the reality that occurs is related to buildings' function in the cultural heritage area. Understanding the building owners in the cultural heritage area in the old city area is needed regarding the use of buildings that can make building users healthier and more prosperous. The definition of healthy buildings, introduced by Levin in 1995, is about the influence of buildings on users and their environment. "A healthy building is one adversely affects neither the health of its occupants nor the larger environment" (Levin, H, 1995). This is important so that the government can achieve the objectives of preserving cultural heritage buildings.

IV. Conclusion

Requirements for fairness of cultural heritage buildings must functionally follow the building structure to be compatible and in harmony with their environment. It is necessary to guarantee the building's reliability, including aspects of safety, health, comfort, and convenience. In particular, health requirements in the reliability of cultural heritage buildings that must be considered are ventilation systems, lighting, sanitation, and the use of materials. This has been implemented in the Kota Lama area in Semarang, although it still requires continuous supervision by the local, regional government.

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