Facade Identification of Colonial Buildings in Blitar, Indonesia

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ABSTRACT

Blitar is one of the National Heritage Cities in Indonesia. Since 1906, the status of *Gemeente* Blitar has resulted in many relics of colonial buildings in Blitar which are still standing today. Colonial buildings have distinctive shapes and facades. Over time, the facade of the building underwent changes due to the replacement of architectural elements, causing the characteristics of historic buildings threatened to be lost. The aim of this study is to identify architectural elements on the facades of colonial buildings in Blitar City as a way to preserve historic buildings. This study used qualitative with a descriptive approach to describe the physical condition of the building. The results of the research show the characteristics of the facade elements in each colonial building, which can later be used as the basis for the Blitar City Government to make policies related to the preservation of historic colonial buildings.

Keywords: Architectural elements, building facades, colonial buildings, Blitar City

1. Introduction

A city is formed from the process of a journey of its culture, history, and people's lives that has lasted for years. The identity of a city is closely related to history because the process of formation goes through long stages. Historic buildings found in a city can be a distinctive aspect that differentiates it from other cities. Historic cities have a close relationship with cultural values making them need preserving as they are considered cultural heritage [1].

Blitar City is one of the National Heritage Cities in Indonesia. This city has historical buildings and areas inherited from the Netherlands because it was once functioned as one of the *Gemeente* (autonomous cities) of the Netherlands in 1906. Buildings that have historical value are recorded in the Blitar City Regional Spatial Plan for 2011-2030, but until now these buildings have not been designated as cultural heritage buildings. Over time, the facades of the historic building underwent changes due to the replacement of architectural elements. Changes in architectural elements can affect the facade of the building resulting in putting the value and characteristics of Blitar City as a historic city in danger of being lost.

The Blitar City Government needs to make a move on preserving colonial buildings as cultural heritage by preserving their historical values.

Preservation according to Burra Carter and the Indonesian Heritage Preservation Charter [2] [3] is a process of managing an heritage through research, planning, protection, maintenance, utilization, supervision, and/or development, with the aim that cultural meaning remains in accordance with the local situation. According to Rahmi and Roychansyah [4] the preservation of historic buildings can be started with the introduction of facades, so that an understanding can emerge in the community about the importance of the existence of historical buildings, then awareness arises to maintain and care for these buildings. There is research on the preservation of the facades of historic buildings in Indonesia which begins with identifying the characteristics of the facade elements as the first step in understanding historical buildings [4] [5] [6] [7] [8].

The aim of this study is to identify architectural elements on the facades of colonial buildings as the early step in building preservation. The results of the study can be implemented as a

basis for the Blitar City Government to make policies related to the preservation of historic buildings and as a reference for repairing building facades that need to be fixed, so as to maximize the potential of historic tourism and increase economic income.

2. Material and Methods

2.1. Historical Study of Blitar City

Blitar City is one of the cities that once had the status of *Gemeente* from 1906 to 1942. The city of Blitar was originally called the Duchy of Blitar, but its existence ended when this area began to fall into the hands of the Dutch around 1723. The colonization that took place in Blitar City after that lasted long that caused many victims and properties lost. These conditions resulted the people of Blitar City to unite to fight against the Dutch. As an attempt to overcome this resistance, The Dutch government issued a *Staatsblad van Nederlandche Indie* Of 1906 Number 150 dated April 1, 1906, which contained the establishment of *Gemeente* Blitar.

Cities that obtained *Gemeente* status had rapid developments in infrastructure, making the distance traveled by Dutch people to small cities in Indonesia get closer and easier [9]. Ease of access resulted in many Dutch people migrating to Indonesia, so that the need for housing and public facilities for them also increased. *Burgerlijke Openbare Werken* (Dutch Colonial Government Public Works Department) made development policies in the form of urban planning, design guidelines for healthy homes, and supervision of the use of building materials [10]. Therefore, it was not a surprised if in some cities with the *Gemeente* government, there were buildings with colonial architecture that still exist today.

2.2. Colonial Architecture in Indonesia

Colonial architecture is an architectural style that developed during the Dutch East Indies period, and is the result of the amalgamation of Western and Eastern cultures [11]. Handinoto [9] divided colonial architectural styles into three, namely: *Indische Empire* (18th-19th century), Transitional Architecture (1890-1915), and Modern Colonial Architecture (1915-1940).

There are limitations in collecting photos of historical buildings in the past, so the identification of architectural elements on building facades refers to the literature on the characteristics of colonial architecture according to previous researchers, such as the characteristics of colonial architecture according to Mulyadi et al. [12]. After historical buildings are identified based on the literature, buildings can be classified based on their architectural style according to Handinoto [11].

2.3. Architectural Elements and Building Facades

Architectural elements are important points in the form of components that make up an architectural object. According to Salura [13], Mulyadi et al. [14], Ramli [15], and Muna et al. [6], the facade of the building is an architectural element. The facade of the building is the part of the building that faces the street, so it becomes the main part that is visually captured by the eye. The view from the facade of the building is a special visual experience for its viewers [16]. The facade of the building can represent the characteristics of the architectural style owned by the building. Historical buildings that have changed their facades will affect their value and characteristics as buildings that represent a historic city.

According to Ramli [15], the facade has several elements, such as roofs, walls, doors, windows, colors, ornaments, materials, textures, and canopies. Muna et al. [6] mentioned that the building facade components are gates and entrances, doors, windows, walls, ground floors, roofs, guardrails, as well as signage and ornaments. Meanwhile, Dafrina [17] stated that the character of the facade can be seen from the exterior walls, doors, windows, and columns. Santoso [18] noted the facade composition consists of functional elements such as windows, doors, sunscreen, canopies, and roofs. Some of these elements will be used as research variables to be observed and identified.

2.4. Cultural Heritage Building Maintenance

According to the Minister of Public Works and Public Housing of the Republic of Indonesia [19], the protection of cultural heritage buildings aims to prevent buildings from being damaged or destroyed. One form of protection of cultural heritage buildings is by building maintenance. Building maintenance is carried out to maintain the reliability of the building so that it is always functional by means of cleaning and minor repairs.

An example of building maintenance based on the Technical Guidelines for the Implementation of a Preserved Cultural Heritage Building [19] is cleaning ornaments or building elements using chemicals that cannot damage the material. Periodic maintenance is carried out to maintain the condition of the building, such as repainting walls and building materials. The color used for repainting is the

color suggested by researchers in the study of cultural heritage buildings. It is not recommended to use new paint colors that can change the characteristics of cultural heritage buildings. Painting on wood material must begin with cleaning in a safe way. Wood in good condition can be preserved, peeled off the paint, dried, and coated with insecticide. Treatment of metal materials that are prone to oxidation can be done by coating the metal with anti-corrosion agents. An example of roof maintenance on a cultural heritage building is the replacement of the loose/broken roof with tile material that matches the original in terms of type, size, and color.

2.5. Methods

The research location is in Blitar City, East Java Province, Indonesia. The research population is 22 historic buildings in the Regional Spatial Plan of Blitar City in 2011-2030. The sample was chosen using purposive sampling technique. The sample was determined based on the following criteria.
1) The criteria determined by the researcher:
    a. It is in the form of a walled building (not a cupola or a temple), because this study discusses colonial architecture.
    b. It still maintains its architectural style, has not been damaged, and has not undergone a total change.
    c. Changes are only in the form of adding building mass or replacing new materials for building maintenance.
2) Criteria for cultural heritage buildings as regulated in Article 5 of the Law of the Republic of Indonesia Number 11 of 2010:
    a. 50 years or older.
    b. Represents the shortest style life of 50 years.
    c. Has special meaning for history, science, education, religion, and/or culture.
    d. Having cultural values for strengthening the nation's personality.

There are no historical buildings listed in the RTRW of Blitar City that have been officially designated as cultural heritage, so with the determination of the sample based on the criteria of cultural heritage buildings, it can possible to filter out historic buildings that have the opportunity to be be designated as as cultural heritage. One building was chosen to represent each building function listed in the Regional Spatial Plan of Blitar City, such as stations, office buildings, hotels, places of worship, places of education, and site areas. The research sample is listed in Table 1, while the location is in Fig. 1.

Table 1: Sample of The Study

| Code	Building's Name	Building's Function
A	Blitar Train Station	Train Station
B	Yonif Commander's Official Residence	Office
C	Tugu Sri Lestari Hotel	Hotel
D	Santo Yusuf Church	Worshipping Place
E	PGSD UM	Education Place
F	Ndalem Gebang	Site Areas

Source: (Antariksa, 2022)

Source: (Antariksa, 2022)
Figure 1: Location of The Study

This study uses a qualitative method with a descriptive approach as a conservation strategy. Each element on the facade of the building is analyzed descriptively. Research variables are in the form of elements on the facade of the building referring to several previous researchers, such as the roofs [15] [6] [18], walls [15] [6] [17], doors [15] [6] [18] [17], and windows [15] [6] [18] [17]. The research framework is listed in Fig. 2.
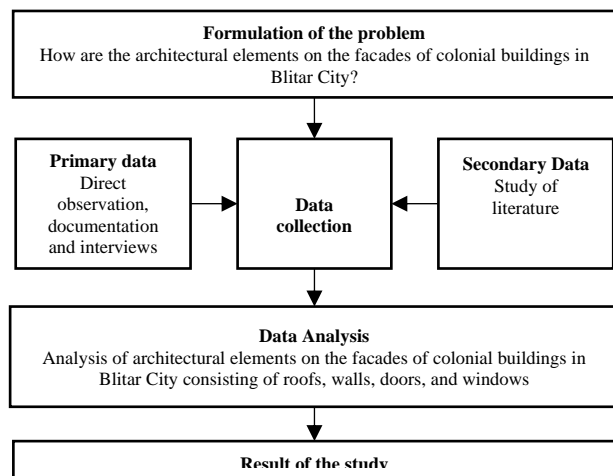
Source: (Antariksa, 2022)
Figure 2: Framework of The Study

3. Results and Discussions

3.1 Historical Study of Research Object

3.1.1 Blitar Train Station

Construction of a Railway Station in Blitar City had been planned since 1875, but it was only inaugurated on June 16, 1884. The station's architectural style was originally *Indische Empire*, but the building was renovated in the 1950s to become Art Deco style. The characteristics of Art Deco buildings according to Athea in Pradipta [20] are that they have horizontal lines and geometric decorations. The facade at the main entrance of the station has ornaments in the form of a combination of vertical and horizontal lines to strengthen the character of the building.

Source: (Antariksa, 2022)
Figure 3: Blitar Train Station

3.1.2 Yonif Commander's Official Residence

There is no information about the year this building was founded, but when viewed from the architectural elements, the architectural style of this building is Modern Colonial Architecture, according to Handinoto [9]. It can be identified from the composition of the facade is not symmetrical from the placement of the doors and the use of glass on the doors and windows.

Source: (Antariksa, 2022)
Figure 4: Yonif Commander's Official Residence

3.1.3 Hotel Tugu Sri Lestari

Hotel Tugu Sri Lestari was founded in 1848 with the *Indische Empire* architectural style.

Initially, this hotel was named Centrum Hotel, because the owner was experiencing financial difficulties, the hotel changed ownership under the management of the Tugu Group in the 1980s. The *Indische Empire* architectural style features a large open terrace without walls with towering Greek pillars supporting the roof [21]. There are four Greek-style pillars with a Tuscan Roman style lined up on the spacious front porch. The characteristics of the *Indische Empire* building are non-rise buildings, have a shield roof type, and there is a classic patterned lisplank around the roof. [12], also fit to the condition of the hotel.

Source: (Antariksa, 2022)
Figure 5: Tugu Sri Lestari Hotel

3.1.4 Santo Yusuf Blitar Church

Santo Yusuf Blitar Church began to be built to coincide with Easter, April 20, 1930, and on April 18, 1931, the construction of this church was completed and blessed. Viewed back from the year it was founded and its architectural elements, Santo Yusuf Blitar Church has a modern colonial architectural style with a touch of Gothic architecture. Characteristics of Gothic architecture resemble in some spots such as pointed arches on doors or windows with stained glass and ribbed vaults [22].

Source: (Antariksa, 2022)
Figure 6: Santo Yusup Blitar Church

3.1.5 PGSD UM Blitar

The building of Universitas Negeri Malang's Elementary School Teacher Education Building (*Gedung Pendidikan Guru Sekolah Dasar Universitas Negeri Malang*/PGSD UM)

The city of Blitar was formerly the *Meisjes Noormalschool* or Dutch East Indies female teacher school which was founded in 1909. The architectural style of PGSD UM is Transitional Architecture, it can be seen from the year of establishment and the elements of the building. Transitional Architecture is a style that developed between 1890 and 1915 [9], while this building was built in 1909. One of the other characteristics of Transitional Architecture is that there are ornaments that show a distinctive impression on the gavel [9], the roof is still in the form of a shield and saddle with a tiled cover, there are columns already using wood and concrete, and the main building material is brick [23].

Source: (Antariksa, 2022)
Figure 7: PGSD UM Blitar

3.1.6 Ndalem Gebang

Ndalem Gebang used to be the residence of the prominent Indonesian proclaimer when he was a child, Soekarno. The building was built in the late 18th century. In 1917, this house was bought by the Soekarno family from an employee of the Garum Blitar Regional Railway Bureau. The existence of Ndalem Gebang currently functions as the Gebang Palace Site Museum which is managed by the Blitar City Government. The architectural style of this building is Transitional Architecture when viewed from the year it was founded, the presence of two wooden columns at the front, striking ornaments on the roof slab, and the formation of a gable roof with a tiled cover.

Source: (Antariksa, 2022)
Figure 8: Ndalem Gebang

3.2 Analysis of Architectural Elements on the Facade

Architectural elements in the identified facades include roofs, walls, doors, and windows.

3.2.1 Roofs

The roof on each building is analyzed for its type and material. Briefly, the analysis can be seen in Table 2.

Table 2: Analysis of Roof Element

Roofs	
A	-Shield and gable roof, slope 30∘ -Roof covering material: tile
B	-Shield roof, 45∘ slope -Roof covering material: tile -There is a dormer on the top of the roof
C	-Shield roof type, slope 30∘ -Roof covering material: tile -There is a classic ornament on the lisplank
D	-The type of shield roof with a slope of 50∘ on the tower, 30∘ on the worship room -Roof covering material: tile -There is a cross ornament on the top of the roof
E	-The type of roof layered with a combination of shield and gable with a slope of 45∘ and 15∘ -Roof covering material: tile -There is a dormer window -There are ornaments in the form of vertical-horizontal lines on the gavel
F	-Type of gable roof with a slope of 45∘ -Roof covering material: tile -There are ornaments on the gavel and the roof

Source: (Antariksa, 2022)

3.2.2 *Walls*

The walls in each building are analyzed for materials, colors, and ornaments in Table 3.

Table 3: Analysis of Wall Element

Walls	
A	-Brick wall material -The walls are white and gray -There are ornaments organized of vertical-horizontal lines -There is a fine black stone decoration around the bottom of the wall
B	-Brick wall material -The walls are white -There is a smooth black stone around the bottom of the wall
C	-Brick wall material with white paint
D	-Brick wall material -Pink paint -There are ornaments organized of horizontal and vertical lines as well as cross ornaments marking the church building -There is a black river stone decoration around the bottom of the wall
E	-Brick wall material -Beige and reddish-brown walls
F	-Brick wall material -The walls are bone white -There is a dark gray river stone decoration around the bottom of the wall

Source: (Antariksa, 2022)

3.2.3 *Doors*

Types and materials of doors in the six buildings are analyzed in Table 4.

Table 4: Analysis of Door Element

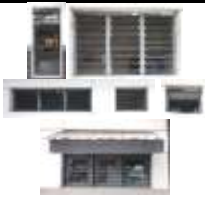| Doors	
A	-The main door is located in the middle of the facade -The exit is an aluminum fence -There is a stainless-steel door with glass on the left side of the building

B	-Double door type -Wooden door material with glass -Location on the facade is not symmetrical
C	-Type of open door without door leaf, pointed arch - Frame material: wood -Located in the middle of the facade
D	-Double door type -Material: wooden door without glass -Located in the middle of the facade
E	-Double door type blinds -Wooden door material
F	-Double door type -Wooden door material with glass -Located in the middle of the facade

Source: (Antariksa, 2022)

3.2.4 *Windows*

The analysis of the window elements of each building in the form of exposure to the type and material is listed in Table 5.

Table 5: Analysis of Window Element

Windows	
A	-All windows have glass, with jalousie type, fixed window, and casement window -Wooden window sills
B	-Types of casement windows -Wooden frames and shutters with glass
- C	(no windows on the facade)
D	-Window shaped pointed arch -Has stained glass, serves as room lighting -Located in the center of the facade, above the door
E	-Types of window blinds for room ventilation -Types of fixed windows act as room lighting -There is ventilation on the wall

 F	-Types of casement windows -Wooden frames and shutters with glass
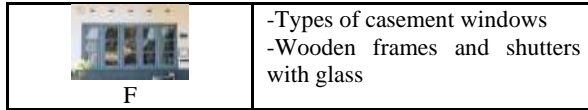
Source: (Antariksa, 2022)

4. Conclusion

The results of the identification of architectural elements on the six facades of colonial buildings in Blitar City produce the following conclusions and suggestions:

1. The existence of colonial buildings in Blitar City is evidence of the development of the city in the *Gemeente* era. Colonial buildings in Blitar City have different architectural styles, such as *Indische Empire*, Transitional Architecture, and Modern Colonial Architecture. This architectural style can be identified based on the year it was founded and the elements that make up the facade.

2. The roofs of colonial buildings in Blitar City have the original shape, but have undergone material changes due to maintenance reasons and the addition of a canopy to suit the needs of building users. Most of the historic buildings have a shield shape, but there are also saddle and cone shapes. The six colonial buildings have roof coverings in the form of tiles with a slope of 15∘-50∘, indicating that the roof design adapts to the tropical climate of Indonesia. There are other roof characteristics of colonial buildings, such as the ornamentation on the lisplank, the gavel ornament, the cross ornament on the church tower, and the dormer window on the roof. The condition of the roofs on the six buildings needs to be maintained so as not to damage the quality of the facades of colonial buildings. If there is any damage, it only needs replacement of the same or similar material.

3. The wall material of colonial buildings in Blitar City is still original, which is composed of bricks and still retains the decoration of river stone or smooth stone that surrounds the walls in some buildings. Ornaments on the walls in the form of a combination of vertical and horizontal lines found on several walls of the building are also still maintained their authenticity. Wall discoloration is done only for maintenance reasons (so it's not original).The color of the walls of the building is dominated by white or beige. Wall treatment with repainting is needed to maintain the condition of the building so that it still looks good.

4. The doors and windows in the station building are no longer original, but in other buildings the shape and material is still quite preserved. There are minor changes such as replacing door handles or hinges and painting/coating the wood for maintenance reasons to keep the doors and windows functioning. The main entrance is a double door that is visible from the facade of the colonial building. The type, size and placement of the doors vary, but most are located symmetrically in the middle of the facade. Most colonial buildings still use wooden frames and doors with blinds, glass panels, or plain models. There are several types of windows on the facade, such as blinds, glass jalousies, casement windows, and fixed windows. The shape of the windows in non-worshipping buildings is square, while the windows in churches are pointed-arch. If there is a replacement or addition of doors and windows, they should still be made of wood so that it can represent a colonial building. The preserverance of wood material on doors and windows can be done by repainting and coating with insecticide.

5. These colonial buildings are cultural heritage that must be preserved. The Blitar City Government can use the results of the identification of these architectural elements to treat or fix the facade of the building that needs to be repaired, so as to maximize the potential of historic tourism. Other academics can continue this research in order to better understand the historical value of colonial buildings in Blitar City, such as looking for the value of cultural meaning or identifying the cultural significance of buildings.

Acknowledgement

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