


Re: Article

Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id>

Mon 5/29/2023 2:13 PM

To:Ranjith Dayaratne <ranjith.dayaratne@gmail.com>

 2 attachments (195 KB)

888802186759703.pdf; Yahoo Mail - BRIfast Transaction Ref 888802186759703.pdf;

Dear Prof. Ranjith Dayaratne,

I attach proof of payment of USD 268 for publishing articles in ISVS e-journal 10.5; the authors' names are Fitri Prawitasari and Amos Setiadi.

Best regards,
Amos Setiadi

From: Ranjith Dayaratne <ranjith.dayaratne@gmail.com>
Sent: Saturday, May 27, 2023 6:44 PM
To: Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id>
Subject: Re: Article

Dear Amos,
Please find attached your invoice.
Ranjith
Archt. Dr. Ranjith Dayaratne,
Asian School of Architecture (ASA),
Melbourne, Australia.
Colombo, Sri Lanka.
Juffair, Bahrain
0061382881177 Australia.
0094777312439 Sri Lanka
0097336224295 Bahrain
visit: asahome.mystrikingly.com

Editor: ISVS e journal (Scopus indexed Journal on Vernacular Settlements);

Editor: Cities People and Places (Journal on Urban Design)

Commonwealth Scholar - 1989; Commonwealth Fellow - 1995

On Wed, May 24, 2023 at 8:08 AM Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id> wrote:

Dear Prof. Ranjith Dayaratne

I submitted the revised article. I've also attached a table of reviewer comments and author responses. Regards,

Amos Setiadi
Professor, Departement of Architecture
Universitas Atma Jaya Yogyakarta
Indonesia.

From: Ranjith Dayaratne <ranjith.dayaratne@gmail.com>

Sent: Friday, May 19, 2023 5:18 PM

To: Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id>

Subject: Re: Article

Dear Amos,

Please find attached the review of your paper. It needs serious revisions. In the reviewed version, the text is edited. There are comments and please respond to each comment carefully following the guidelines.

One of the major issues is that there is no proper review of literature. Please include a review of all significant research that has examined the issue of retaining authenticity in conservation from across the world and then in Indonesia. Discuss the findings of previous research to show the current knowledge and where the gaps of that knowledge exist.

The research methodology mentions interviews but there is no data and analysis. It also needs refinement to say how exactly to measure authenticity because at the end in the conclusion, you pass judgements as high and low etc.

Please change the font size in the tables to Ariel Narrow 10 point. Please follow the template.

Please do the revision as requested.

Make sure that the revision is done **on this reviewed version itself, which is edited**. No other versions are accepted.

Please revise and save as 'ISVSej_10.5.15 Fitri revised' without any track change marks or comments. Please use the guidelines as attached for revision. Please also drop the resolution of the images to suit an e publication. File size is too large.

Send me the revised word copy by 27th April 2023

It is lined up for publication in May 2023, if the revision goes well. If not it will go to June 2023.

I look forward to hearing from you,

Ranjith

 [ISVSej_10.5.15_Fitri Reviewed.docx](#)

Archt. Dr. Ranjith Dayaratne,
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On Thu, May 4, 2023 at 10:42 AM Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id> wrote:

Dear Prof. Ranjith Dayaratne

I agree. I have submitted papers according to the template. Are OneDrive attachments accessible? I resubmit it in this attachment. 

[Manuscript Setiadi Amos Konservasi FINAL 1.docx](#)

Regards,
Amos Setiadi

From: Ranjith Dayaratne <ranjith.dayaratne@gmail.com>

Sent: Thursday, May 4, 2023 11:49 AM

To: Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id>

Subject: Re: Article

Dear Amos,

Thank you for your interest in the ISVS e-journal which is Scopus indexed and is now published monthly. It is reviewed thoroughly. The journal is open access. We do not reject papers unless the paper is beyond any development. We help the authors to bring the papers upto the standards expected. Your paper falls well within the scope of the journal

It has a publication fee of 268 USD.

If you agree to the fees, please send the paper as per the template downloadable from the site and confirm and it will go to review. It will then be lined up for publication in 10.5 due in May 2023. Once reviewed, and revised and if accepted, it will be published in the journal in May 2023.

Looking forward to hearing from you,

Sincerely,

Ranjith

Arch. Dr. Ranjith Dayaratne,
Asian School of Architecture (ASA),
Melbourne, Australia.
Colombo, Sri Lanka.

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0061382881177 Australia.

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Commonwealth Scholar - 1989; Commonwealth Fellow - 1995

On Thu, May 4, 2023 at 7:12 AM Prof. Dr. Amos Setiadi S.T., M.T. <amos.setiadi@uajy.ac.id> wrote:

Dear Prof. Ranjith Dayaratne

I submitted an article entitled " Conservation of Chinatown architetcure in Ketandan Village, Yogyakarta, Indonesia"

Thank you.

Kind regards,

Prof. Dr. Amos Setiadi
Departemen Architecture
Universitas Atma Jaya Yogyakarta

 [Manuscript_Setiadi Amos_Konservasi_FINAL.docx](#)

Issues of Authenticity: Conservation of Chinatown Architecture in Ketandan Village, Yogyakarta, Indonesia

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Abstract

Ketandan also known as the Chinatown is a village in the center of Yogyakarta City inhabited by the Chinese ethnic community. Ketandan is a cultural heritage of Chinese architecture in Yogyakarta and has experienced architectural transformations over the years. Now there are efforts to conserve the significant buildings and therefore, it is important to support the conservation of architecture in the Ketandan village.

This research used a qualitative method which involved identifying authenticity, as well as damage and handling of the building components. Data were collected through field surveys, documentation, and measurement of the buildings. Subsequently, it prepared developing plans for reconstruction and restoration, as well as plans for changes and additions to the components.

Referring to the 2018 Master Plan for the Maintenance and Development of the Ketandan Cultural Area, which is one of the plans for the maintenance and development of culture according to the Regional Regulation of the Special Region of Yogyakarta Number 3 of 2017, there are 18 lists of houses planned for revitalization. Revitalization as an effort to develop Chinatown Village by constructing and arranging buildings with Chinese architectural styles is one of the strategies for creating the Kraton–Malioboro Area as a tourism area based on culture and urban life.

Based on the values of cultural heritage buildings and readiness to build based on survey results and discussions with Ketandan community leaders, 5 (five) priority revitalization plans were determined based on cultural heritage building values, namely: (1) Ketandan 5 and 7 Shop Houses; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop House; (4) UD Liong Shop House; dan (5) Windiastuti Shop House.

Keywords: Conservation, Chinatown Architecture, Village, Ketandan

Introduction

Ketandan Village is a Chinatown area located in the center of Yogyakarta. The name Ketandan was derived from the word "*ka-tandaan*", which means the home of the tax collectors. In the past, village was the residence of families of tax collectors. Since the reign of Hamengku Buwana I in 1756, a Chinese captain was appointed to manage various needs within the community and to collect tolls, opium as well as market taxes. The financial and economic

conditions of Yogyakarta palace significantly improved during the reigns of Hamengku Buwana I and Hamengku Buwana II, mainly due to revenue from toll and market taxes. This indicates that the presence of the Chinese community has a significant role in the economic aspect of Yogyakarta Sultanate. Based on this history, Ketandan is categorized as a *Kraton* Cultural Heritage Area, as stated in the Yogyakarta Special Region Governor Regulation No. 75/KEP/2017, dated March 20, 2017. As part of the *Kraton* Cultural Heritage Area, Ketandan requires arrangements that complies with the preservation rules. This research is essential in supporting the preservation and arrangement of the building facades in Ketandan in order to make it an example of a Cultural Heritage Area with Chinese architectural characteristics.

The Law No. 11 of 2010 concerning cultural heritage states that preservation is a dynamic effort to maintain cultural heritage and its value through protection, development, and utilization. According to ICOMOS New Zealand Charter (2010), conservation is the process of understanding and caring for places to safeguard cultural heritage values. Conservation is based on respect for the material, association, meaning, and use of a place. It requires a careful approach and necessary work to maintain authenticity and integrity, ensuring that the place and its values can be passed down to future generations. The Burra Charter (1999) defines conservation as the maintenance of a place to preserve its cultural significance. It also forms the basis of preservation activities.

Chinatown in cities usually consist of rows of houses, which also serve as shops (shop houses). These single-roof houses typically do not have a yard, and in the middle of each, is usually an open space without a roof. Chinese houses are characterized by the pointed shape of the roofs at the ends and the carvings on the pillars. Every Chinatown always has one or two temples (*klenteng*). The temple buildings have a distinctive shape and rich Chinese ornamentation. One form of Chinese culture that can still be found in any Chinatown is the building style, emphasizing Chinese culture in the curved roof form. The roof shape found is almost similar to that of southern China. Most Chinese immigrants who came to Indonesia were from the South China Provinces, particularly Guangdong and Fujian (Lilananda, 1998).

Ketandan Village is a historical area with significant old buildings. In general, there are three types of buildings in the village, namely those with Chinese, Dutch, and Javanese architectural styles. This demonstrates the acculturation of the architecture of Ketandan Village. The area is located East of the Tugu - Keraton axis, administratively in Ngupasan Village, Gondomanan District (Fig. 1).



Fig 1: Ketandan Village

Source: Author, 2023

Research Problem

This research aims to determine the importance of preserving architectural identity, both local and resulting from acculturation, especially amidst the development of building functions that are followed by changes in the building forms. The demand for functional development also drives changes to the spatial arrangements and building appearances changes. The research problem is that the efforts of identifying architecture in Ketandan Village, which was created through a combination of traditional Chinese architecture and its acculturation with the local culture (Javanese) are inadequately understood. This research intends to provide that to help the conservation activities in Ketandan Village. To measure revitalization priorities using the following criteria: Important score. Has essential historical, scientific, educational, religious, and cultural values; Authenticity and Integrity. The façade elements are still original, and not much has been added; Characteristics of Form and Facade. There are distinctive architectural elements; Structural Damage Conditions. The condition of the facade structure is not feasible.

Theoretical Background

Architectural uniqueness depends on the response and utilization of environmental resources that reflect the relationship between people and Nature. Therefore, architecture reflects the diversity of cultures as well as the relationship between people and Nature. The psychological needs of building occupants are the main factors in designing architectural spaces (Snyder, 1984). These factors are related to how the occupants understand the shape of the space or the building, how they can meet their needs, and how they reflect their lifestyles and symbols. Buildings, as symbols, can serve as a medium for communicating the existence of an individual or a particular social group, whether consciously or unconsciously (Rapoport, 1977).

Heritage buildings have a connection with the core values they embody, depending on the three axes, namely people, place, and time, as well as the environment from which they are formed, with their buildings having the characteristic of a cultured society. There are several strategies to maintain the value of heritage buildings, and this includes the reuse to preserve their architecture as well as aesthetic and economic values (Al-eqaby et al., 2023).

Architectural changes often occur in buildings that require adaptation to environmental, functional, and aesthetic developments. Building changes also provide an opportunity for owners or users of the building to meet their needs through the architectural change processes. It can create dynamic architectural spaces to enhance environmental quality and aesthetics (Asefi, 2012). It also involves economic, social, and cultural factors at varying scales, although fundamentally unique and cannot be generalized, they are related to the added value of the building (Kurniati et al., 2022). Adding contemporary value to heritage buildings can make them part of the global economic development (Barrera, 2013).

In the modern context, the challenge of preserving historical values is the difficulty of connecting tradition and modernity without the support of the local government (Heldak; Soroczynska, 2019). On the other hand, cultural heritage assets owned by the individuals have problems with funding to maintain their existence as cultural heritage buildings (Prasidha et al., 2020). Changes in architectural form do not occur spontaneously but gradually following the needs and desires of the occupants. Traditional architecture can accommodate new functions because it is considered flexible enough to change according to the economic status and needs of the occupants (Hamid & Eltahir, 2014). The economic factors and the occupants' needs are referred to by Sassateli (2007) as a consumerist society because the way of life and social identity are driven by consumptive behavior.

The statements indicate that changes in lifestyle and social conditions can drive the architectural changes made by the owner or occupants of a building. Vernacular architecture can change to accommodate new needs (Jagatramka et al., 2021). In traditional societies and cultures, geographical space is understood as a force in articulating a place as well as existential footing for identity and a sense of ownership (Dayaratne, 2020). Reviving traditional cultural traits, but not in a rigid way, can offer freedom, new ways of building, thinking, and new activities (Dayaratne, 2020). On the other hand, a building's architectural style is often identified as a symbol of a region (Clarke & Crossley, 2000). From these statements, it can be concluded that changes in architectural forms are an effort to accommodate new needs. Spatial

adaptation aims to achieve harmony between the occupants and a place believed to improve their lives (Afroz, 2012).

Vernacular architectural forms have become standardized in traditional societies with a long cultural history. In Chinese society tradition, *feng-shui* serves as a means of personalization (self-personification), or a way to express one's individuality in a building suitable only for the occupant (self-identification). Connected to the human cosmology traditional philosophy as the universe center, *feng-shui* makes the location of a suitable building for the ego-centered universe. This central point of the universe can influence the occupant's life in the future. According to cosmological thought, the macrocosm transformation into a microcosm of habitation results in the standard basic plan of the *si-he-yua*. The symmetrical main axis of a building symbolizes the dynamic balance of the *yin-yang* universe and intersects with the axis mundi line leading to the North-South cardinal points. The symbol of the universe axis connecting the earth and the fixed point of the North star with an imaginary line starts from the courtyard box of *si-he-yuan* type plan.

The square-shaped floor plan represents the earth under the traditional philosophy that the earth is square-shaped, and the sides of the floor plan facing the four cardinal directions visualize the division of space into four segments. Traditional Chinese cosmology depicts the sky as a round dome divided into four segments following the cardinal directions. This concept follows various philosophical beliefs, such as the *yin-yang* philosophy, the five elements of *wu-xing*, the symbols of the dragon-tiger representing the four mythological animals ruling over the sky, and the division according to the 3x3 square *luo-shu*. The floor plan of a simple 3-Jian dwelling is the basic module of folk housing, with an odd number of units usually taken to maintain symmetry along the main axis. A simple house plan is commonly referred to as "one empty room and two chambers" (*yi-tang-er-nei*), or "one bright and two dark" (*yi-ming-liang-an*) (Zhou et. al, 2002).

One important characteristic of traditional Chinese buildings is that they are constructed on a raised podium, with the surface level higher than the surrounding ground level. The height of the *tai* surface is related to the building function. In traditional Chinese architecture, building materials, such as wood, bamboo, and ceramics are mainly non-permanent. Using these materials reflects the understanding that buildings are not eternal, just like people with limited lifespans. More permanent materials, such as stone, are used only in tomb buildings, with the belief that the human spirit will continue to live on after death.

The upper part of the building is made of wood. The wooden frame is a strong and stable self-standing structure. The walls are partitions and do not bear the structural load (non-bearing all, curtain wall). The roof is a massive construction. The use of materials tend to be over-designed in dimensions because Chinese architecture relies heavily on the weight of the construction mass to obtain stability and strength. The mass weight in the structure is expected to provide resistance to wind and earthquakes. In traditional Chinese building construction, wind bracing frames are not commonly known, nor are triangular *vakwerk* rafters that are known today. Wooden construction has proven to withstand major earthquakes due to the highly flexible knots in the wooden structure. From the historical research of Chinese architecture, it turns out that the dimensions evolution of *dou-gung* and columns have become more economical in terms of materials (Liang, 2005).

In the construction of the saddle roof with *kopwand*, the *gable wall*, and the *shan-qiang* wall also function as a firewall. The side edges of the wall are made much higher than the roof surface next to it, and this shape aims to prevent the spread of fire through the wooden roof structure when a neighboring building catches fire. The addition of height to the side wall (*kopwand*, *shan-qiang*) is higher than the *wuwungan* line and the roof plane. Usually, the top of the wall is decorated (Fig. 2). The decorations at the end of the *shan-hua* wall differentiate the social status of the occupants.

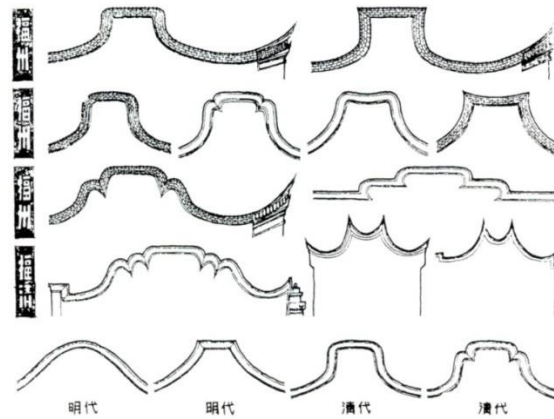


Fig 2: Shape of the side wall (*kopwand*)
Source: Knapp, in Kustedja (2014)

The variety of ornaments found on the side walls symbolize beliefs and good hopes (immortal, Buddhist) (Fig.3).

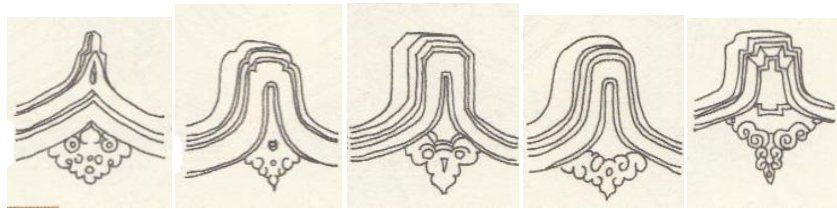


Fig 3: Symbols of fire/south, metal/north, wood/east, water/west, and earth/center Source: Knapp, in Kustedja,2014)
Source: Knapp, in Kustedja,2014)

In Chinatown Semarang, several buildings represent early and distinct Chinese architecture. The roofs have a saddle shape and are circular. The *Tou kung* console is visible on the support of the second-floor foyer, and there is a curtain purlin on the roof terrace (Sudarwani et al., 2023). The primary considerations for preservation by Rahardjo (2013) are outlined in his ideas regarding assessment, typology of values, and ranking for cultural heritage management, while the explanation is as follows: 1) Historical value consists of figures and events, 2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species, 3) Cultural values consist of identity and art, 4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values for children and adults, 5) Political values and critical historical events in historical and ancient heritage objects can be considered significant if compatible with current political priorities. This multiple meaning can be used to increase public attention in efforts to protect and preserve, 6) Economic value consists of functional and revitalization value, and 7) Integrity value includes design, physical environment, materials, and artistry. Based on this review, it can be concluded that preserving cultural heritage buildings requires criteria and a priority scale of handling.

Research Method

This qualitative research was conducted in Ketandan village, Yogyakarta City, Indonesia. The data were obtained through observation and interviews (Leedy; Ormrod, 2001), and photo/documentation. The research employed direct observation of building forms and various ornaments. The interviews were conducted to obtain information about the history of the building from the owners/occupants (Fig. 4). A documentary survey was used for deductive reflection of observation results. Documentation of five buildings was carried out to describe the condition of the building, the changes that occurred, and the elements left unchanged.

Based on the Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Yogyakarta Special Region Cultural Office, 2018, 18 (eighteen) buildings were planned for revitalization. These buildings are:: (1) Mamuning Shop House; (2) Windiastuti Shop House; (3) Tam Yuan Chuan Shop House; (4) Anton Hidayat Shop House; (5) Berkah Jaya Shop; (6) Kwan Nio Tio Shop House; (7) Ketandan Wetan No.29 Shop House; (8) Ketandan Lor No.21 Shop House; (9) Ketandan Lor No.56 Shop House; (10) dr. Nugroho Shop House; (11) Secodiningrat/Tan Jin Sing Capiten House; (12) UD.Liong Shop House; (13) 41 Shop House; (14) Permata Gold Store Shop House; (15) Ketandan Kidul No.2B Shop House; (16) Aisha Cosmetics Shop House; (17) Matahari Gold Store Shop House; (18) Mustika Sakti Gold Store Shop House. Resource persons from community leaders in the Ketandan area provided several input criteria: (1) historical value, age of the building, the distance between buildings that are close enough, and shape and authenticity of the building. (2) consideration of the authenticity of the building, materials, colors, and characteristics, not removing existing elements and not adding elements that were not there before. Based on these criteria, buildings 5 and 7 (Shop House). Buildings 22, 24, and 26 were chosen because they have a history related to Secodiningrat's home (the building used to be Secodiningrat's stables). After discussing with community leaders, it was decided to choose building number 5 and 7 (Shop House). While building numbers 22, 24, and 26 cannot be selected because there are problems contacting the owner.



Fig 4: Discussions with the occupant and public figures at Ketandan Village.

Source: author, 2023

Evaluation

The rating scale determines the development priorities of the 18 (eighteen) buildings on the list. By using the primary considerations of preservation by Rahardjo (2013) regarding assessment, typology of values, and ranking for cultural heritage management as well as input from the Ketandan community. Then it can be explained as follows: (1) Historical value consists of figures and events. (2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species. (3) Cultural values consist of identity and art. (4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values in children and adults. (5) Political values and critical historical events in historical and ancient heritage objects can be considered vital if compatible with current political priorities. This significant meaning can be used to increase public attention in efforts to protect and preserve. (6) Economic value consists of functional and revitalization value. And (7) Integrity value or integrity value consists of design, physical environment, materials, and artistry.

Development priority is based on the rating scale: 1. Very Low; 2. Low; 3. Moderate; 4. Height; 5. Very High. The following values are used:

1. Cultural Heritage Buildings Values

Table 1: Priority Based on Cultural Heritage Building Values.

Source: Author, 2023

Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13
	Mamuning Shop House	Windiausti Shop House	Tam Yuan Chuan Shop House	Anton Hidayat Shop House	Berkah Jaya House	Kwan Nio Tio Shop House	Ketandan Wetan 29 Shop House	Ketandan Lor 21 Shop House	Ketandan Lor 56 Shop House	dr. Nugroho House	UD Liong Shop House	41 Shop House	Permata Shop House
Important score. Has essential historical, scientific, educational, religious, and cultural values.	1	1	1	1	1	3	1	1	1	1	2	2	1
Authenticity and Integrity. The façade elements are still original, and not much has been added.	3	2	4	3	1	3	3	4	1	3	4	4	1
Characteristics of Form and Facade. There are distinctive architectural elements.	2	4	3	3	2	5	4	4	2	5	5	5	2
Structural Damage Conditions. The condition of the facade structure is not feasible.	2	4	2	2	1	5	3	2	2	4	2	2	2
Total	8	11	10	9	5	16	11	11	6	13	13	13	6
Revitalization priority	7	4	5	6	7	2	4	4	8	3	4	5	8

Revitalization priority order:

- (1) Ketandan 5 and 7 Shop House
 - (2) Kwan Nio Tio Shop House
 - (3) dr. Nugroho Shop House
 - (4) UD. Liong Shop House
 - (5) 41 Shop House
2. Readiness to be revitalized.

Table 2: Priority scale based on readiness for revitalization.

Source: Author, 2023

Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13
	Mamuning Shop House	Windiasuti Shop House	Tam Yuan Chuan Shop House	Anton Hidayat Shop House	Berkah Jaya House	Kwan Nio Tio Shop House	Ketandan Wetan 29 Shop House	Ketandan Lor 21 Shop House	Ketandan Lor 56 Shop House	dr. Nugroho House	UD Liong Shop House	41 Shop House	Permata Shop House
Function. It is still functioning correctly as a house or shop.	5	3	3	5	4	5	2	1	4	2	5	5	3
Location. Close to: 1. Office of the Governor of the Special Region of Yogyakarta 2. Jalan Margo Mulyo 3. Secodiningrat Culture House	4	5	4	3	2	3	2	2	2	4	2	3	3
Number of Floors. The fewer the number of floors, the less area to be revitalized.	3	3	5	3	5	5	5	5	5	3	3	3	3
Cultural Heritage	8	11	10	9	5	16	11	11	6	13	13	13	6

Building Values													
Existing Survey Accessibility. Ease of access and survey of existing buildings.	3	5	3	5	3	5	2	2	4	1	5	5	5
Total	23	27	25	25	19	34	22	21	21	23	28	29	20
Revitalization priority.		5				1					4	3	

Revitalization priority order:

- (1) Kwan Nio Tio Shop House
- (2) Ketandan 5 and 7 Shop House
- (3) 41 Shop House
- (4) UD. Liong Shop House
- (5) Windyastuti Shop House

Five buildings that are a priority for revitalization are as follows:

A. Kwan Nio Tio Shop House

Kwan Nio Tio Shop House is located on Ketandan Lor Street No. 58. The building consists of one floor and combines Chinese as well as Dutch architectural styles. The typical feature of the Dutch-style Kwan Nio Tio shop-house is the stepped gable and the gable window on the tympanum plane. The upper front part has a geometric pentagon-shaped rooster. Currently, the building facade has four folding doors with bovenlicht above it and is adorned with stained glass. Moreover, the walls of the building are plastered with exposed stone, and there is a galvalume canopy.



Fig 5: Kwan Nio Tio Shop House in 1930 and 1973

Source: Occupants, 2020

According to Fig 5, from the year 1930, the Kwan Nio Tio Shop House facade part has an open terrace as the living room with grand pillars, and the walls appear to be painted in a bright color white. There are doors and windows after the terrace. From 1973, a small part of the house as shown from the side has no visible grand pillars. There is a concrete canopy pulled by a steel cable and an open terrace. The facade damage of Kwan Nio Tio Shop House are as follows (Fig.6):



Fig 6: Identification of Facade Damage of the Kwan Nio Tio Shop House
Source: Author, 2023

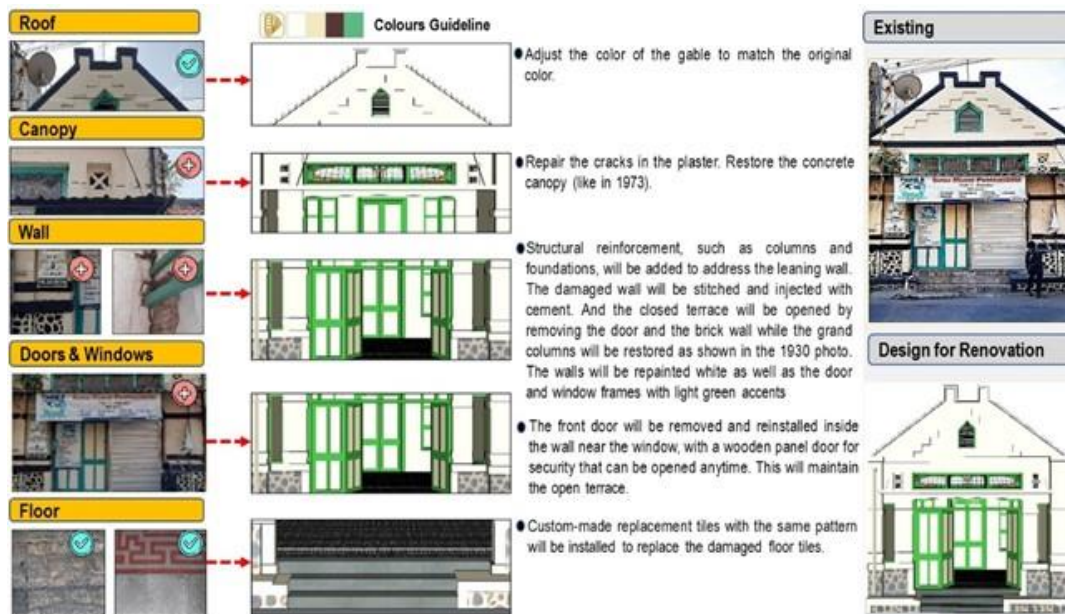


Fig 7: Proposed Renovation for Kwan Nio Tio Shop House
Source: Author, 2023



Fig 8: Renovation Design for Kwan Nio Tio Shop House
Source: Author, 2023

B. Ketandan 5 and 7 Shop House

Ketandan 5 and 7 Shop House is located on Ketandan Kidul Street. Based on discussions and agreements with the community, this building was included in the list of buildings to be revitalized to replace the Secodiningrat / Tan Jin Sing Capiten House building, which the DIY Culture Office had previously renovated. Ketandan 5 and 7 Shop House is a building with Chinese architectural nuances consisting of 2 (two) floors. The condition of the building, when viewed from the front, is still quite well maintained. In its current state, this building functions as a gold shop. The facade damage identification results of Kebunan 5 and 7 Shop House are shown in Fig 9.

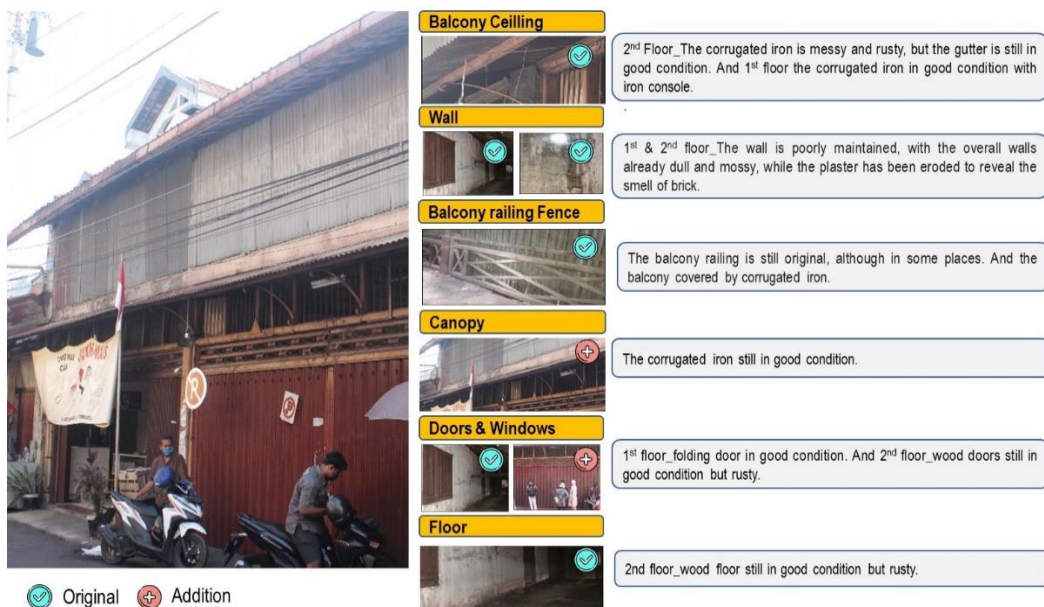


Fig 9: Identification of Facade Damage of the Ketandan 5 and 7 Shop House
Source: Author, 2023

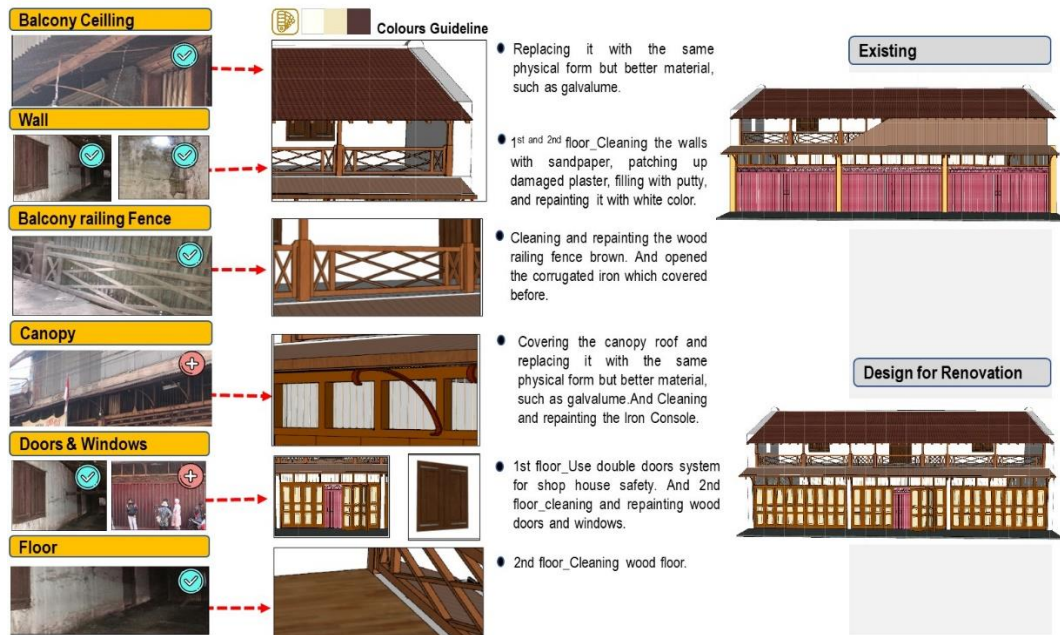


Fig 10: Proposed Renovation for the Ketandan 5 and 7 Shop House

Source: Author, 2023

C. The Shop House 41

Shop House 41 is located in Hook, between Lor Pasar and Ketandan Kidul Streets. According to the owner (Lauw Kok Tiang), this building, also known as Tan Bing Thay and Yo Ing Lan's house, has been occupied by their family since 1928, which is the first generation to live in the house. This period was contemporaneous with the construction of the Beringharjo market in 1925. Like other houses in the area, the house has a duplex model and two floors, while the roof has a saddle model as well as a ridge with a typical Chinese pattern. There are several variations of floral or flora motifs on the window grilles and each building has an altar offering to ancestors.

Currently, the first floor of Shop House 41 is used as a grocery store, while the second floor is used as a residence and warehouse. The facade damage identification results of Shop House 41 are shown in Fig 11.

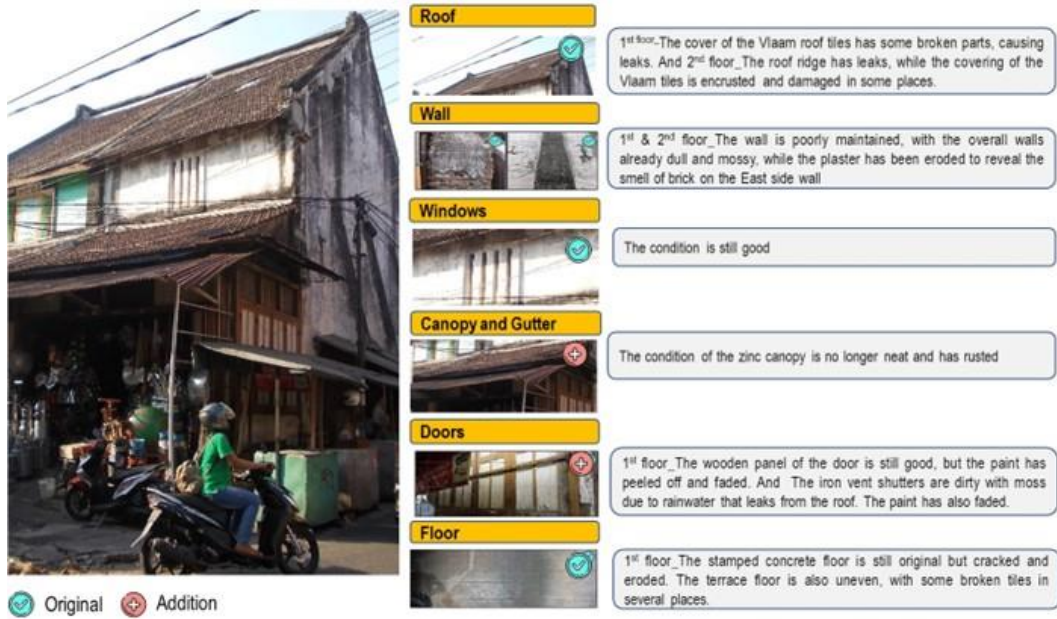


Fig 11: Identification of Facade Damage of the 41 Shop House
Source: Author, 2023

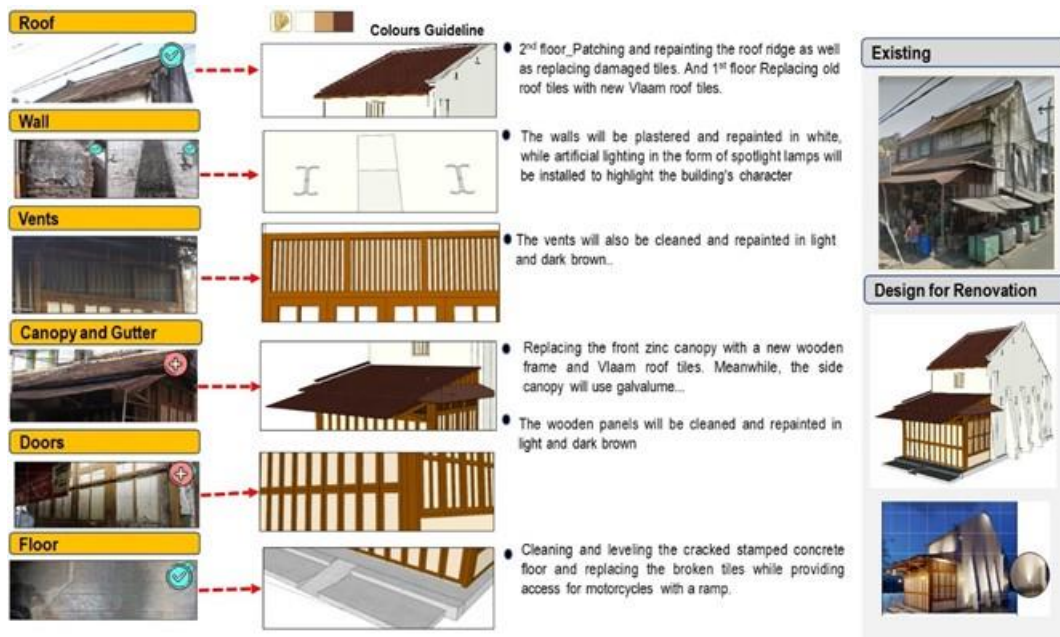


Fig 12: Proposed Renovation for the 41 Shop
Source: Author, 2023



Fig 13: Renovation Design for Shop House 41

Source: Author, 2023

D. UD. Liong Shop House

Liong Shop House is located on Lor Pasar Street, with a Chinese architectural style, and consists of two floors. The first floor is a grocery store, while the second is a warehouse. The damages to the Liong Shop House facade is shown in Fig 14.



Fig 14: Identification of Facade Damage of the Liong Shop House

Source: Author, 2023

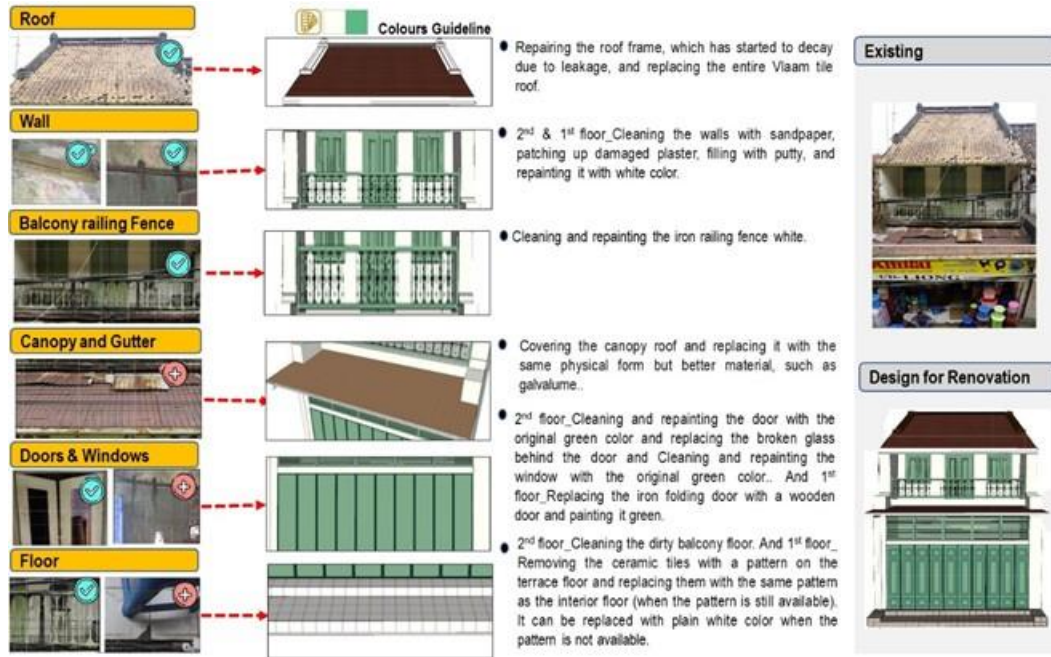


Fig 15: Proposed Renovation for Liong Shop House

Source: Author, 2023



Fig 16: Renovation Design for UD.Liong Shop House

Source: Author, 2023

E. Windyastuti Shop House

Windiastuti Arjonosurjo shop house is located on the corner of Ketandan Lor No.7 and Suryaatmajan Street. This building is a fusion of Chinese and Dutch architectural styles. It consists of two floors, with the first currently used as a shop and the second as a warehouse. The facade damage for the Windiastuti Arjonosurjo shop house are shown in Fig 17.



Fig 17: Identification of Facade Damage of the Windiastuti Shop House
Source: Author, 2023

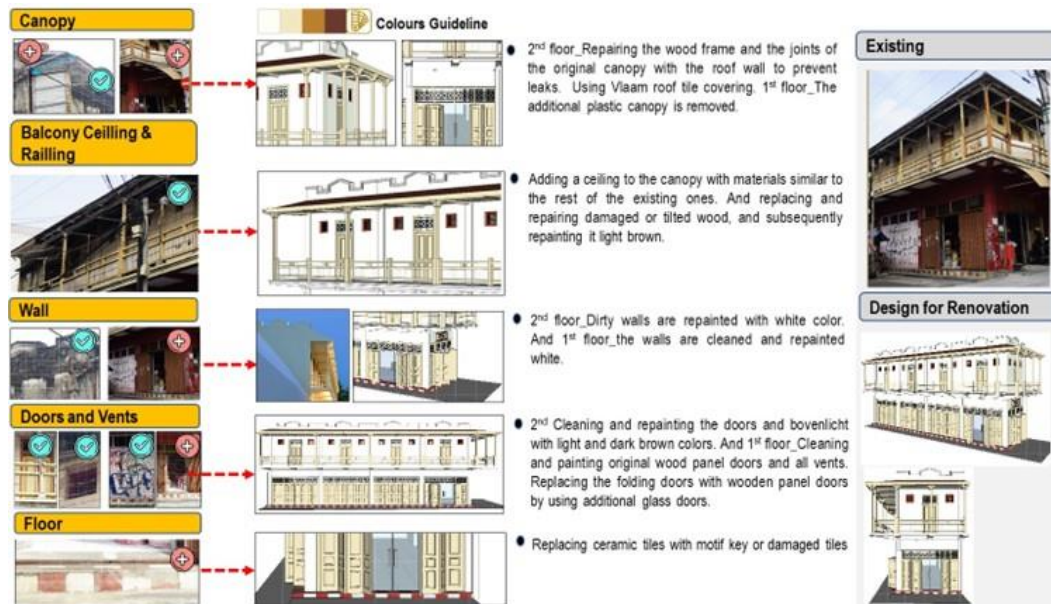


Fig 18: Proposed Renovation for Windiastuti Shop House
Source: Author, 2023



Fig 19: Renovation Design for Windiastuti Shop House

Source: Author, 2023

Conclusion

Based on the discussion above, the following conclusions can be made about each building: Revitalization as a preservation effort is made by arranging facilities with Chinese architectural styles. This preservation is one of the strategies for developing the Kraton and Malioboro Areas as tourism areas based on culture and urban life. Based on the values of cultural heritage buildings and their readiness to be revitalized, as well as based on survey results and discussions with local community leaders, five priority buildings were determined, namely: (1) Ketandan 5 and 7 Shop House; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop Houses; (4) UD Liong Shop House; and (5) Windiastuti Shop House.

Recommendations

Recommendations for Practitioners

Ketandan Village has buildings characterized by Chinese architectural style that has been acculturated with local architecture. Its existence as a Kraton Cultural Heritage Area supports cultural tourism which has made the preservation of the building to be important. Although commercial activities have caused changes in the appearance of the buildings, the characteristics of Chinese architecture, especially on the side walls (*kopwand*), decorations, doors, and windows, can still be found. Therefore, architects are encouraged to maintain building elements as a characteristic of Chinese architecture and highlight them again as core elements.

Recommendations for Further Research

These findings require further research. The factor of changes in the appearance of buildings caused by the increasing trading activities is only one of the factors influencing the dynamics of Chinese architecture in Ketandan Village. As a result of the increasing scarcity of non-durable building materials (wood) and the widespread use of modern materials (lightweight steel), there is an urgent need for research on the use of modern materials in Chinese architecture in Ketandan Village without neglecting the aspect of its philosophical values.

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No	Sub Section	Reviewed Prof. Ranjith Dayaratne	Revision
1	Article title	<p>Issues of Authenticity</p> <p>This is an interesting paper that deals with the transformations of historically significant buildings. In the abstract, it mentions authenticity. In the theoretical discussion, it mentions values, authenticity and charters etc. Its conclusion reports of measurements of authenticity as observed in 5 buildings. However, the research does not employ a serious</p>	<p>Revised. Added as follows:</p> <p>Revitalization as a preservation effort is made by arranging facilities with Chinese architectural styles. This preservation is one of the strategies for developing the Kraton and Malioboro Areas as tourism areas based on culture and urban life. Based on the values of cultural heritage buildings and their readiness to be revitalized, as well as based on survey results and discussions with local community leaders, five priority buildings were determined, namely: (1) Ketandan 5 and 7 Shop House; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop Houses; (4) UD Liong Shop House; and (5) Windiastuti Shop House.</p>

		<p>tool to measure it. The research must develop a rating scale for measuring authenticity before passing such judgements on personal opinions.</p> <p>Following must be addressed.</p> <p>1. The conclusions therefore do not make sense. The paper does not focus on the issue and carry it through the research.</p> <p>2. Research methodology mentions interviews, but there is no data from this research activity. They must be presented. Observation data is clear. The data</p>	<p>Revisions to the comments in items 1,2, and 3 are described in the analysis section.</p>
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		<p>from the other research methods are not clearly presented.</p> <p>3. Authenticity must be defined in the theoretical background and how to measure it must be discussed. What are the parameters to measure it. Without that, you cannot say high and low etc. in the conclusion.</p>	
2	Abstract	<p>Paragraph 2</p> <p>There is no serious research related to authenticity in this paper.</p>	<p>Referring to the 2018 Master Plan for the Maintenance and Development of the Ketandan Cultural Area, which is one of the plans for the maintenance and development of culture according to the Regional Regulation of the Special Region of Yogyakarta Number 3 of 2017, there are 18 lists of houses planned for revitalization. Revitalization as an effort to develop Chinatown Village by constructing and arranging buildings with Chinese architectural styles is one of the strategies for creating the Kraton–Malioboro Area as a tourism area based on culture and urban life.</p> <p>Based on the values of cultural heritage buildings and readiness to build based on survey results and discussions with Ketandan community leaders, 5 (five) priority revitalization plans were determined based on cultural heritage building values, namely: (1) Ketandan 5 and 7 Shop Houses; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop House; (4) UD Liong Shop House; dan (5) Windiastuti Shop House.</p>
3	Research Problem	<p>This must end with a definition of authenticity</p>	<p>Added as follows:</p>

		and how to measure authenticity. Its objectives should be to ascertain authenticity in the buildings in the face of transformations.	To measure revitalization priorities using the following criteria: Important score. Has essential historical, scientific, educational, religious, and cultural values; Authenticity and Integrity. The façade elements are still original, and not much has been added; Characteristics of Form and Facade. There are distinctive architectural elements; Structural Damage Conditions. The condition of the facade structure is not feasible.
4	Theoretical Background	This is not a proper critical review of literature. Please provide a 'critical' review of previous research that has examined this issue and their findings. Show the current knowledge and the gaps of knowledge.	Additional References for building appraisals: The primary considerations for preservation by Rahardjo (2013) are outlined in his ideas regarding assessment, typology of values, and ranking for cultural heritage management, while the explanation is as follows: 1) Historical value consists of figures and events. 2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species. 3) Cultural values consist of identity and art. 4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values for children and adults. 5) Political values and critical historical events in historical and ancient heritage objects can be considered significant if compatible with current political priorities. This multiple meaning can be used to increase public attention in efforts to protect and preserve. 6) Economic value consists of functional and revitalization value. 7) Integrity value includes design, physical environment, materials, and artistry.
		(Sudarwani et al., 2023). Abruptly ends	Added, as follows: Based on this review, it can be concluded that preserving cultural heritage buildings requires criteria and a priority scale of handling.
5	Research Method	Before this, the paper must develop a rating scale for measuring authenticity and use that rating scale to ascertain	Based on the Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Yogyakarta Special Region Cultural Office, 2018, 18 (eighteen) buildings were planned for revitalization. These buildings are:: (1) Mamuning Shop House; (2) Windiastuti Shop House; (3) Tam Yuan Chuan Shop House; (4) Anton Hidayat Shop House; (5) Berkah Jaya Shop;(6) Kwan Nio Tio Shop House; (7) Ketandan Wetan No.29 Shop House; (8) Ketandan Lor No.21 Shop House; (9) Ketandan Lor No.56 Shop House; (10) dr. Nugroho Shop House; (11) Secodiningrat/Tan Jin Sing Capiten House; (12) UD.Liong Shop House; (13) 41 Shop House; (14) Permata Gold Store Shop House; (15) Ketandan Kidul No.2B Shop House; (16) Aisha Cosmetics Shop House; (17) Matahari Gold Store Shop House; (18) Mustika Sakti Gold Store Shop House.

	<p>authenticity in these buildings.</p> <p>The conclusion says 'high level' of authenticity etc. without any measurement. This is not proper research.</p> <p>photo documentation must be presented.</p> <p>Interview data must be presented.</p> <p>Say how these five were selected.</p>	<p>Resource persons from community leaders in the Ketandan area provided several input criteria: (1) historical value, age of the building, the distance between buildings that are close enough, and shape and authenticity of the building. (2) consideration of the authenticity of the building, materials, colors, and characteristics, not removing existing elements and not adding elements that were not there before. Based on these criteria, buildings 5 and 7 (Shop House). Buildings 22, 24, and 26 were chosen because they have a history related to Secodiningrat's home (the building used to be Secodiningrat's stables). After discussing with community leaders, it was decided to choose building number 5 and 7 (Shop House). While building numbers 22, 24, and 26 cannot be selected because there are problems contacting the owner.</p> <div data-bbox="945 464 1823 738">  </div> <p>Discussions with the occupant and public figures at Ketandan Village.</p> <p>Source : author, 2023</p>
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List of Houses in Kampung Ketandan

Source : Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Dinas Kebudayaan Daerah Istimewa Yogyakarta, 2018

The rating scale determines the development priorities of the 18 (eighteen) buildings on the list. By using the primary considerations of preservation by Rahardjo (2013) regarding assessment, typology of values, and ranking for cultural heritage management as well as input from the Ketandan community. Then it can be explained as follows: (1) Historical value consists of figures and events. (2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species. (3) Cultural values consist of identity and art. (4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values in children and adults. (5) Political values and critical historical events in historical and ancient heritage objects can be considered vital if compatible with current political priorities. This significant meaning can be

used to increase public attention in efforts to protect and preserve. (6) Economic value consists of functional and revitalization value. And (7) Integrity value or integrity value consists of design, physical environment, materials, and artistry.

Development priority is based on the rating scale: 1. Very Low; 2. Low; 3. Moderate; 4. Height; 5. Very High. The following values are used:

1. Cultural Heritage Buildings Values

Table 1: Priority Based on Cultural Heritage Building Values.

Sumber: Author, 2023

Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Mamuning Shop House	Windiastruti Shop House	Tam Yuan Chuan Shop House	Anton Hidayat Shop House	Berkah Jaya House	Kwan Nio Tio Shop House	Ketandan Wetan 29 Shop House	Ketandan Lor 21 Shop House	Ketandan Lor 56 Shop House	dr. Nugroho House	UD Liong Shop House	41 Shop House	Pernata Shop House	Ketandan Lor 28 Shop House	Aisha Accesoris Shop House	Matahari Golld Store Shop	Mustika Sakti Gold Store Shop	Ketandan 5 & 7 Shop House
Important score. Has essential historical, scientific, educational, religious, and cultural values.	1	1	1	1	1	3	1	1	1	1	2	2	1	1	1	1	1	5

				Authenticity and Integrity. The façade elements are still original, and not much has been added.	3	2	4	3	1	3	3	4	1	3	4	4	1	1	2	3	3	4		
				Characteristics of Form and Facade. There are distinctive architectural elements.	2	4	3	3	2	5	4	4	2	5	5	5	2	2	4	4	4	4	5	
				Structural Damage Conditions. The condition of the facade structure is not feasible.	2	4	2	2	1	5	3	2	2	4	2	2	2	2	2	2	2	2	2	3
				Total	8	11	10	9	5	16	11	11	6	13	13	13	6	6	9	10	10	10	17	
				Revitalization priority	7	4	5	6	7	2	4	4	8	3	4	5	8	8	6	5	5	5	1	

Revitalization priority order:

- (1) Ketandan 5 and 7 Shop House
- (2) Kwan Nio Tio Shop House
- (3) dr. Nugroho Shop House
- (4) UD. Liong Shop House
- (5) 41 Shop House

			area to be revitalized.																				
			Cultural Heritage Building Values	8	11	10	9	5	16	11	11	6	13	13	13	6	6	9	10	10	17		
			Existing Survey Accessibility. Ease of access and survey of existing buildings.	3	5	3	5	3	5	2	2	4	1	5	5	5	5	5	1	5	4		
			Total	23	27	25	25	19	34	22	21	21	23	28	29	20	20	23	20	25	32		
			Revitalization priority.		5				1					4	3						2		
			<p>Revitalization priority order:</p> <ul style="list-style-type: none"> (1) Kwan Nio Tio Shop House (2) Ketandan 5 and 7 Shop House (3) 41 Shop House (4) UD. Liong Shop House (5) Windyastuti Shop House 																				
			<p>Five buildings that are a priority for revitalization are as follows:</p> <p>1. Kwan Nio Tio Shop House</p>																				



Original + Addition

Roof



The stepped gable, a characteristic of the Indis architecture, is still original and in good condition, but the paint color does not match the original color. There are cracks in the plaster due to wild plants.

Canopy



The current canopy is made of galvalume. The original steel slings holding the canopy are still present.

Wall



The walls have been repainted with a color similar to the original. There is an additional wall on the front right and left sides. The structure on the front wall is tilted due to wild plants that have eroded the walls.

Doors & Windows



The previously open terrace is now covered with a wooden and rolling door that is still in good condition

Floor



The key tiles are still original, although several others on the outer side are already damaged

Roof



Colours Guideline



● Adjust the color of the gable to match the original color.

Canopy



● Repair the cracks in the plaster. Restore the concrete canopy (like in 1973).

Wall



● Structural reinforcement, such as columns and foundations, will be added to address the leaning wall. The damaged wall will be stitched and injected with cement. And the closed terrace will be opened by removing the door and the brick wall while the grand columns will be restored as shown in the 1930 photo. The walls will be repainted white as well as the door and window frames with light green accents

Doors & Windows



● The front door will be removed and reinstalled inside the wall near the window, with a wooden panel door for security that can be opened anytime. This will maintain the open terrace.

Floor



● Custom-made replacement tiles with the same pattern will be installed to replace the damaged floor tiles.

Existing



Design for Renovation



2. Ketandan Kidul No 5 & 7 Shop House



Original Addition

Balcony Ceiling



2nd Floor_ The corrugated iron is messy and rusty, but the gutter is still in good condition. And 1st floor the corrugated iron in good condition with iron console.

Wall



1st & 2nd floor_ The wall is poorly maintained, with the overall walls already dull and mossy, while the plaster has been eroded to reveal the smell of brick.

Balcony railing Fence



The balcony railing is still original, although in some places. And the balcony covered by corrugated iron.

Canopy



The corrugated iron still in good condition.

Doors & Windows



1st floor_ folding door in good condition. And 2nd floor_ wood doors still in good condition but rusty.

Floor

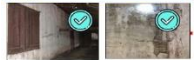


2nd floor_ wood floor still in good condition but rusty.

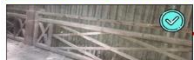
Balcony Ceiling



Wall



Balcony railing Fence



Canopy



Doors & Windows



Floor



Colours Guideline



● Replacing it with the same physical form but better material, such as galvalume.

● 1st and 2nd floor_ Cleaning the walls with sandpaper, patching up damaged plaster, filling with putty, and repainting it with white color.

● Cleaning and repainting the wood railing fence brown. And opened the corrugated iron which covered before.

● Covering the canopy roof and replacing it with the same physical form but better material, such as galvalume. And Cleaning and repainting the Iron Console.

● 1st floor_ Use double doors system for shop house safety. And 2nd floor_ cleaning and repainting wood doors and windows.

● 2nd floor_ Cleaning wood floor.

Existing



Design for Renovation



3. Ruko 41 Shop House



Original Addition

Roof



1st floor_The cover of the Vlaam roof tiles has some broken parts, causing leaks. And 2nd floor_The roof ridge has leaks, while the covering of the Vlaam tiles is encrusted and damaged in some places.

Wall



1st & 2nd floor_The wall is poorly maintained, with the overall walls already dull and mossy, while the plaster has been eroded to reveal the smell of brick on the East side wall

Windows



The condition is still good

Canopy and Gutter



The condition of the zinc canopy is no longer neat and has rusted

Doors



1st floor_The wooden panel of the door is still good, but the paint has peeled off and faded. And The iron vent shutters are dirty with moss due to rainwater that leaks from the roof. The paint has also faded.

Floor



1st floor_The stamped concrete floor is still original but cracked and eroded. The terrace floor is also uneven, with some broken tiles in several places.

Roof



Vents



Canopy and Gutter



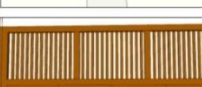
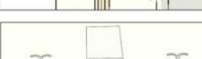
Doors



Floor



Colours Guideline



2nd floor_Patching and repainting the roof ridge as well as replacing damaged tiles. And 1st floor Replacing old roof tiles with new Vlaam roof tiles.

The walls will be plastered and repainted in white, while artificial lighting in the form of spotlight lamps will be installed to highlight the building's character

The vents will also be cleaned and repainted in light and dark brown..

Replacing the front zinc canopy with a new wooden frame and Vlaam roof tiles. Meanwhile, the side canopy will use galvalume...

The wooden panels will be cleaned and repainted in light and dark brown

Cleaning and leveling the cracked stamped concrete floor and replacing the broken tiles while providing access for motorcycles with a ramp.

Existing



Design for Renovation



4. UD. Liong Shop House



✓ Original + Addition

Roof



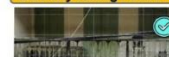
Waterproofing is required between the roof ridge and tiles to prevent leakage. The Vlaam tiles on the balcony are messy, while some are broken, causing leakage and the wooden frame to start deteriorating.

Wall



2nd floor_The paint and plaster are dirty, faded, and damaged with some peelings. 1st floor_The wall paint has faded, and the plaster is peeling due to dampness.

Balcony railing Fence



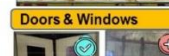
The tiles are dirty, have crusty deposits, and are poorly maintained.

Canopy and Gutter



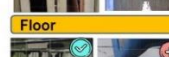
The corrugated iron is messy and rusty, but the gutter is still in good condition.

Doors & Windows



2nd floor_The door is still original with double door leaves, but the inner glass of the leaf is already broken. And The windows are still original with faded paint. And 1st floor_The folding door is rusty, the paint has faded, and the rails are slightly jammed.

Floor

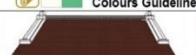


2nd floor_The tiles are dirty, have crusty deposits, and are poorly maintained. And 1st floor_The ceramic motif has faded, and some corners are broken.

Roof



Colours Guideline



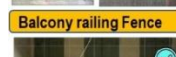
- Repairing the roof frame, which has started to decay due to leakage, and replacing the entire Vlaam tile roof.

Wall



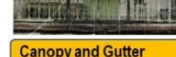
- 2nd & 1st floor_Cleaning the walls with sandpaper, patching up damaged plaster, filling with putty, and repainting it with white color.

Balcony railing Fence



- Cleaning and repainting the iron railing fence white.

Canopy and Gutter



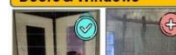
- Covering the canopy roof and replacing it with the same physical form but better material, such as galvalume.

Doors & Windows



- 2nd floor_Cleaning and repainting the door with the original green color and replacing the broken glass behind the door and Cleaning and repainting the window with the original green color. And 1st floor_Replacing the iron folding door with a wooden door and painting it green.

Floor



- 2nd floor_Cleaning the dirty balcony floor. And 1st floor_ Removing the ceramic tiles with a pattern on the terrace floor and replacing them with the same pattern as the interior floor (when the pattern is still available). It can be replaced with plain white color when the pattern is not available.

Existing



Design for Renovation



5. Windyastuti Shop House



Original Addition

Canopy



2nd floor_The original balcony canopy is tilted and damaged toward the wall. A new lightweight steel frame canopy has been added on top to protect from rain. And 1st floor_There is an addition of a plastic canopy that is cluttered

Balcony Ceiling & Railing



The original balcony roof ceiling is no longer present, with only a small portion remaining at the edge. The wooden frame exposed to the rain has started to deteriorate and rot. And The balcony railing is still original, although in some places, the column and the railing are tilting, while some are already damaged and rotten. The new paint color is inconsistent and has already peeled off or faded.

Wall



2nd floor_The wall is black due to moss from the weather. And 1st floor_There are also some vandalism scratches

Doors and Vents



2nd floor_The wooden doors vents are still original and in good condition. And 1st floor_There are still original wood panel doors in good condition but there is some vandalism. The iron folding doors are an additional element.

Floor



1st floor_The new ceramic on the terrace floor is eroded and cracked at several points.

Canopy



Balcony Ceiling & Railing



Wall



Doors and Vents



Floor



Colours Guideline



2nd floor_Repairing the wood frame and the joints of the original canopy with the roof wall to prevent leaks. Using Vlaam roof tile covering. 1st floor_The additional plastic canopy is removed.

Adding a ceiling to the canopy with materials similar to the rest of the existing ones. And replacing and repairing damaged or tilted wood, and subsequently repainting it light brown.

2nd floor_Dirty walls are repainted with white color. And 1st floor_the walls are cleaned and repainted white.

2nd Cleaning and repainting the doors and bovenlicht with light and dark brown colors. And 1st floor_Cleaning and painting original wood panel doors and all vents. Replacing the folding doors with wooden panel doors by using additional glass doors.

Replacing ceramic tiles with motif key or damaged tiles

Existing



Design for Renovation



6	Conclusion	<p>a high authenticity level</p> <p>How did you make this judgement. No verifiable evidence.</p>	<p>Revitalization as a preservation effort is made by arranging facilities with Chinese architectural styles. This preservation is one of the strategies for developing the Kraton and Malioboro Areas as tourism areas based on culture and urban life. Based on the values of cultural heritage buildings and their readiness to be revitalized, as well as based on survey results and discussions with local community leaders, five priority buildings were determined, namely: (1) Ketandan 5 and 7 Shop House; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop Houses; (4) UD Liong Shop House; and (5) Windiastuti Shop House.</p>
7	References	<p>Please make sure that the references are as per the standards and complete. All the listed references must be cited in text.</p>	<p>Raharjo, S. (2013) Beberapa Permasalahan Pelestarian Kawasan Cagar Budaya dan Strategi Solusinya, Jurnal Konservasi Cagar Budaya, 7(2), pp. 4-17</p>
		<p>Liang, S. (2005) Chinese Architecture: A Pictorial History. Dover Publications. Inc. Mineola. New York. <u>missing</u></p>	<p>It's in the body of the article:</p> <p>In traditional Chinese building construction, wind bracing frames are not commonly known, nor are triangular <i>vakwerk</i> rafters that are known today. <u>W</u>ooden construction has proven to withstand major earthquakes due to the highly flexible knots in the wooden structure. From the historical research of Chinese architecture, it turns out that the dimensions evolution of <i>dou-gung</i> and columns have become more economical in terms of materials (Liang, 2005).</p>

Issues of Authenticity: Conservation of Chinatown Architecture in Ketandan Village, Yogyakarta, Indonesia

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Abstract

Ketandan also known as the Chinatown is a village in the center of Yogyakarta City inhabited by the Chinese ethnic community. Ketandan is a cultural heritage of Chinese architecture in Yogyakarta and has experienced architectural transformations over the years. Now there are efforts to conserve the significant buildings and therefore, it is important to support the conservation of architecture in the Ketandan village.

This research used a qualitative method which involved identifying authenticity, as well as damage and handling of the building components. Data were collected through field surveys, documentation, and measurement of the buildings. Subsequently, it prepared developing plans for reconstruction and restoration, as well as plans for changes and additions to the components.

Referring to the 2018 Master Plan for the Maintenance and Development of the Ketandan Cultural Area, which is one of the plans for the maintenance and development of culture according to the Regional Regulation of the Special Region of Yogyakarta Number 3 of 2017, there are 18 lists of houses planned for revitalization. Revitalization as an effort to develop Chinatown Village by constructing and arranging buildings with Chinese architectural styles is one of the strategies for creating the Kraton–Maliob

Based on the values of cultural heritage buildings and readiness to build based on survey results and discussions with Ketandan community leaders, 5 (five) priority revitalization plans were determined based on cultural heritage building values, namely: (1) Ketandan 5 and 7 Shop Houses; (2) Kwan Nio Tio Shop House; (3) dr. Nugroho House; (4) UD Liong Shop House; and (5) 41 Shop Houses. Meanwhile, based on the readiness to be built, namely: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop House; (4) UD Liong Shop House; dan (5) Windiastuti Shop House.

Keywords: Conservation, Chinatown Architecture, Village, Ketandan

Introduction

Ketandan Village is a Chinatown area located in the center of Yogyakarta. The name Ketandan was derived from the word "*ka-tandaan*", which means the home of the tax collectors. In the past, village was the residence of families of tax collectors. Since the reign of Hamengku Buwana I in 1756, a Chinese captain was appointed to manage various needs within the community and to collect tolls, opium as well as market taxes. The financial and economic

conditions of Yogyakarta palace significantly improved during the reigns of Hamengku Buwana I and Hamengku Buwana II, mainly due to revenue from toll and market taxes. This indicates that the presence of the Chinese community has a significant role in the economic aspect of Yogyakarta Sultanate. Based on this history, Ketandan is categorized as a *Kraton* Cultural Heritage Area, as stated in the Yogyakarta Special Region Governor Regulation No. 75/KEP/2017, dated March 20, 2017. As part of the *Kraton* Cultural Heritage Area, Ketandan requires arrangements that complies with the preservation rules. This research is essential in supporting the preservation and arrangement of the building facades in Ketandan in order to make it an example of a Cultural Heritage Area with Chinese architectural characteristics.

The Law No. 11 of 2010 concerning cultural heritage states that preservation is a dynamic effort to maintain cultural heritage and its value through protection, development, and utilization. According to ICOMOS New Zealand Charter (2010), conservation is the process of understanding and caring for places to safeguard cultural heritage values. Conservation is based on respect for the material, association, meaning, and use of a place. It requires a careful approach and necessary work to maintain authenticity and integrity, ensuring that the place and its values can be passed down to future generations. The Burra Charter (1999) defines conservation as the maintenance of a place to preserve its cultural significance. It also forms the basis of preservation activities.

Chinatown in cities usually consist of rows of houses, which also serve as shops (shop houses). These single-roof houses typically do not have a yard, and in the middle of each, is usually an open space without a roof. Chinese houses are characterized by the pointed shape of the roofs at the ends and the carvings on the pillars. Every Chinatown always has one or two temples (*klenteng*). The temple buildings have a distinctive shape and rich Chinese ornamentation. One form of Chinese culture that can still be found in any Chinatown is the building style, emphasizing Chinese culture in the curved roof form. The roof shape found is almost similar to that of southern China. Most Chinese immigrants who came to Indonesia were from the South China Provinces, particularly Guangdong and Fujian (Lilananda, 1998).

Ketandan Village is a historical area with significant old buildings. In general, there are three types of buildings in the village, namely those with Chinese, Dutch, and Javanese architectural styles. This demonstrates the acculturation of the architecture of Ketandan Village. The area is located East of the Tugu - Keraton axis, administratively in Ngupasan Village, Gondomanan District (Fig. 1).



Fig 1: Ketandan Village

Source: Author, 2023

The Research Problem

This research aims to determine the importance of preserving architectural identity, both local and resulting from acculturation, especially amidst the development of building functions that are followed by changes in the building forms. The demand for functional development also drives changes to the spatial arrangements and building appearances changes. The research problem is that the efforts of identifying architecture in Ketandan Village, which was created through a combination of traditional Chinese architecture and its acculturation with the local culture (Javanese) are inadequately understood. This research intends to provide that to help the conservation activities in Ketandan Village. To measure revitalization priorities using the following criteria: Important score. Has essential historical, scientific, educational, religious, and cultural values; Authenticity and Integrity. The façade elements are still original, and not much has been added; Characteristics of Form and Facade. There are distinctive architectural elements; Structural Damage Conditions. The condition of the facade structure is not feasible.

Theoretical Background

Architectural uniqueness depends on the response and utilization of environmental resources that reflect the relationship between people and Nature. Therefore, architecture reflects the diversity of cultures as well as the relationship between people and Nature. The psychological needs of building occupants are the main factors in designing architectural spaces (Snyder, 1984). These factors are related to how the occupants understand the shape of the space or the building, how they can meet their needs, and how they reflect their lifestyles and symbols. Buildings, as symbols, can serve as a medium for communicating the existence of an individual or a particular social group, whether consciously or unconsciously (Rapoport, 1977).

Heritage buildings have a connection with the core values they embody, depending on the three axes, namely people, place, and time, as well as the environment from which they are formed, with their buildings having the characteristic of a cultured society. There are several strategies to maintain the value of heritage buildings, and this includes the reuse to preserve their architecture as well as aesthetic and economic values (Al-eqaby et al., 2023).

Architectural changes often occur in buildings that require adaptation to environmental, functional, and aesthetic developments. Building changes also provide an opportunity for owners or users of the building to meet their needs through the architectural change processes. It can create dynamic architectural spaces to enhance environmental quality and aesthetics (Asefi, 2012). It also involves economic, social, and cultural factors at varying scales, although fundamentally unique and cannot be generalized, they are related to the added value of the building (Kurniati et al., 2022). Adding contemporary value to heritage buildings can make them part of the global economic development (Barrera, 2013).

In the modern context, the challenge of preserving historical values is the difficulty of connecting tradition and modernity without the support of the local government (Heldak; Soroczynska, 2019). On the other hand, cultural heritage assets owned by the individuals have problems with funding to maintain their existence as cultural heritage buildings (Prasidha et al., 2020). Changes in architectural form do not occur spontaneously but gradually following the needs and desires of the occupants. Traditional architecture can accommodate new functions because it is considered flexible enough to change according to the economic status and needs of the occupants (Hamid & Eltahir, 2014). The economic factors and the occupants' needs are referred to by Sassateli (2007) as a consumerist society because the way of life and social identity are driven by consumptive behavior.

The statements indicate that changes in lifestyle and social conditions can drive the architectural changes made by the owner or occupants of a building. Vernacular architecture can change to accommodate new needs (Jagatramka et al., 2021). In traditional societies and cultures, geographical space is understood as a force in articulating a place as well as existential footing for identity and a sense of ownership (Dayaratne, 2020). Reviving traditional cultural traits, but not in a rigid way, can offer freedom, new ways of building, thinking, and new activities (Dayaratne, 2020). On the other hand, a building's architectural style is often

identified as a symbol of a region (Clarke & Crossley, 2000). From these statements, it can be concluded that changes in architectural forms are an effort to accommodate new needs. Spatial adaptation aims to achieve harmony between the occupants and a place believed to improve their lives (Afroz, 2012).

Vernacular architectural forms have become standardized in traditional societies with a long cultural history. In Chinese society tradition, *feng-shui* serves as a means of personalization (self-personification), or a way to express one's individuality in a building suitable only for the occupant (self-identification). Connected to the human cosmology traditional philosophy as the universe center, *feng-shui* makes the location of a suitable building for the ego-centered universe. This central point of the universe can influence the occupant's life in the future. According to cosmological thought, the macrocosm transformation into a microcosm of habitation results in the standard basic plan of the *si-he-yua*. The symmetrical main axis of a building symbolizes the dynamic balance of the *yin-yang* universe and intersects with the axis mundi line leading to the North-South cardinal points. The symbol of the universe axis connecting the earth and the fixed point of the North star with an imaginary line starts from the courtyard box of *si-he-yuan* type plan.

The square-shaped floor plan represents the earth under the traditional philosophy that the earth is square-shaped, and the sides of the floor plan facing the four cardinal directions visualize the division of space into four segments. Traditional Chinese cosmology depicts the sky as a round dome divided into four segments following the cardinal directions. This concept follows various philosophical beliefs, such as the *yin-yang* philosophy, the five elements of *wu-xing*, the symbols of the dragon-tiger representing the four mythological animals ruling over the sky, and the division according to the 3x3 square *luo-shu*. The floor plan of a simple 3-Jian dwelling is the basic module of folk housing, with an odd number of units usually taken to maintain symmetry along the main axis. A simple house plan is commonly referred to as "one empty room and two chambers" (*yi-tang-er-nei*), or "one bright and two dark" (*yi-ming-liang-an*) (Zhou et. al, 2002).

One important characteristic of traditional Chinese buildings is that they are constructed on a raised podium, with the surface level higher than the surrounding ground level. The height of the *tai* surface is related to the building function. In traditional Chinese architecture, building materials, such as wood, bamboo, and ceramics are mainly non-permanent. Using these materials reflects the understanding that buildings are not eternal, just like people with limited lifespans. More permanent materials, such as stone, are used only in tomb buildings, with the belief that the human spirit will continue to live on after death.

The upper part of the building is made of wood. The wooden frame is a strong and stable self-standing structure. The walls are partitions and do not bear the structural load (non-bearing all, curtain wall). The roof is a massive construction. The use of materials tend to be over-designed in dimensions because Chinese architecture relies heavily on the weight of the construction mass to obtain stability and strength. The mass weight in the structure is expected to provide resistance to wind and earthquakes. In traditional Chinese building construction, wind bracing frames are not commonly known, nor are triangular *vakwerk* rafters that are known today. Wooden construction has proven to withstand major earthquakes due to the highly flexible knots in the wooden structure. From the historical research of Chinese architecture, it turns out that the dimensions evolution of *dou-gung* and columns have become more economical in terms of materials (Liang, 2005).

In the construction of the saddle roof with *kopwand*, the gable wall, and the *shan-qiang* wall also function as a firewall. The side edges of the wall are made much higher than the roof surface next to it, and this shape aims to prevent the spread of fire through the wooden roof structure when a neighboring building catches fire. The addition of height to the side wall (*kopwand*, *shan-qiang*) is higher than the *wuwungan* line and the roof plane. Usually, the top of the wall is decorated (Fig. 2). The decorations at the end of the *shan-hua* wall differentiate the social status of the occupants.

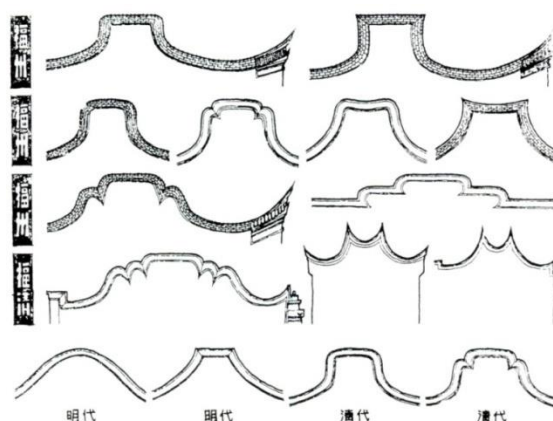


Fig 2: Shape of the side wall (*kopwand*)

Source: Knapp, in Kustedja (2014)

The variety of ornaments found on the side walls symbolize beliefs and good hopes (immortal, Buddhist) (Fig.3).



Fig. 3: Symbols of fire/south, metal/north, wood/east, water/west, and earth/center Source:

Knapp, in Kustedja,2014)

Source: Knapp, in Kustedja,2014)

In Chinatown Semarang, several buildings represent early and distinct Chinese architecture. The roofs have a saddle shape and are circular. The *Tou kung* console is visible on the support of the second-floor foyer, and there is a curtain purlin on the roof terrace (Sudarwani et al., 2023). The primary considerations for preservation by Rahardjo (2013) are outlined in his ideas regarding assessment, typology of values, and ranking for cultural heritage management, while the explanation is as follows: 1) Historical value consists of figures and events, 2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species, 3) Cultural values consist of identity and art, 4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values for children and adults, 5) Political values and critical historical events in historical and ancient heritage objects can be considered significant if compatible with current political priorities. This multiple meaning can be used to increase public attention in efforts to protect and preserve, 6) Economic value consists of functional and revitalization value, and 7) Integrity value includes design, physical environment, materials, and artistry. Based on this review, it can be concluded that preserving cultural heritage buildings requires criteria and a priority scale of handling.

Research Methods

This qualitative research was conducted in Ketandan village, Yogyakarta City, Indonesia. The data were obtained through observation and interviews (Leedy; Ormrod, 2001), and photo/ documentation. The research employed direct observation of building forms and various ornaments. The interviews were conducted to obtain information about the history of the building from the owners/occupants (Fig. 4). A documentary survey was used for deductive reflection of observation results. Documentation of five buildings was carried out to describe the condition of the building, the changes that occurred, and the elements left unchanged.

Based on the Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Yogyakarta Special Region Cultural Office, 2018, 18 (eighteen) buildings were planned for revitalization. These buildings are:: (1) Mamuning Shop House; (2) Windiastuti Shop House; (3) Tam Yuan Chuan Shop House; (4) Anton Hidayat Shop House; (5) Berkah Jaya Shop; (6) Kwan Nio Tio Shop House; (7) Ketandan Wetan No.29 Shop House; (8) Ketandan Lor No.21 Shop House; (9) Ketandan Lor No.56 Shop House; (10) dr. Nugroho Shop House; (11) Secodiningrat/Tan Jin Sing Capiten House; (12) UD.Liong Shop House; (13) 41 Shop House; (14) Permata Gold Store Shop House; (15) Ketandan Kidul No.2B Shop House; (16) Aisha Cosmetics Shop House; (17) Matahari Gold Store Shop House; (18) Mustika Sakti Gold Store Shop House. Resource persons from community leaders in the Ketandan area provided several input criteria: (1) historical value, age of the building, the distance between buildings that are close enough, and shape and authenticity of the building. (2) consideration of the authenticity of the building, materials, colors, and characteristics, not removing existing elements and not adding elements that were not there before. Based on these criteria, buildings 5 and 7 (Shop House). Buildings 22, 24, and 26 were chosen because they have a history related to Secodiningrat's home (the building used to be Secodiningrat's stables). After discussing with community leaders, it was decided to choose building number 5 and 7 (Shop House). While building numbers 22, 24, and 26 cannot be selected because there are problems contacting the owner.



Fig. 4: Discussions with the occupant and public figures at Ketandan Village.
Source: Author, 2023



Fig. 5: List of Houses in Kampung Ketandan

Source : Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Dinas Kebudayaan Daerah Istimewa Yogyakarta, 2018

Evaluation

The rating scale determines the development priorities of the 18 (eighteen) buildings on the list. By using the primary considerations of preservation by Rahardjo (2013) regarding assessment, typology of values, and ranking for cultural heritage management as well as input from the Ketandan community. Then it can be explained as follows: (1) Historical value consists of figures and events. (2) The value of science consists of discoveries, the emergence of new varieties, the application of new technologies, and the emergence of new species. (3) Cultural values consist of identity and art. (4) Educational values are explained as objects that have the potential to be able to provide knowledge and inculcate moral values in children and adults. (5) Political values and critical historical events in historical and ancient heritage objects can be considered vital if compatible with current political priorities. This significant meaning can be used to increase public attention in efforts to protect and preserve. (6) Economic value consists of functional and revitalization value. And (7) Integrity value or integrity value consists of design, physical environment, materials, and artistry.

Development priority is based on the rating scale: 1. Very Low; 2. Low; 3. Moderate; 4. Height; 5. Very High. The following values are used:

Table 1: Priority Based on Cultural Heritage Building Values.

Source: Author, 2023

No	Buildings	Criteria				Total	Revitalization priority
		Important score. Has essential historical, scientific, educational, religious, and cultural values.	Authenticity and Integrity. The façade elements are still original, and not much has been added.	Characteristics of Form and Facade. There are distinctive architectural elements.	Structural Damage Conditions The condition of the facade structure is not feasible.		
1	Mamuning shop house.	1	3	2	2	8	7
2	Windiasuti Shop House.	1	2	4	4	11	4
3	Tam Yuan Chuan Shop House.	1	4	3	2	10	5
4	Anton Hidayat Shop House.	1	3	3	2	9	6
5	Berkah Jaya House.	1	1	2	1	5	7
6	Kwan Nio Tio Shop House.	3	3	5	5	16	2
7	Ketandan Wetan 29 Shop House.	1	3	4	3	11	4
8	Ketandan Lor 21 Shop House	1	4	4	2	11	4
9	Ketandan Lor 56 Shop House.	1	1	2	2	6	8
10	dr. Nugroho House	1	3	5	4	13	3
11	UD Liong Shop House	2	4	5	2	13	4

12	41 Shop House	2	4	5	2	13	5
13	Permata Shop House	1	1	2	2	6	8
14	Ketandan Lor 28 Shop House	1	1	2	2	6	8
15	Aisha Accesoris Shop House	1	2	4	2	9	6
16	Matahari Golld Store Shop House	1	3	4	2	10	5
17	Mustika Sakti Gold Store Shop	1	3	4	2	10	5
18	Ketandan 5 & 7 Shop House	5	4	5	3	17	1

Revitalization priority order:

- (1) Kwan Nio Tio Shop House
- (2) Ketandan 5 and 7 Shop House
- (3) 41 Shop House
- (4) UD. Liong Shop House
- (5) Windyastuti Shop House

Table 2: Priority scale based on readiness for revitalization.

Source: Author, 2023

No	Buildings	Criteria					Total	Revitalization priority
		Function. It is still functioning correctly as a house or shop	Location. Close to: 1. Office of the Governor of the Special Region of Yogyakarta 2. Jalan Margo Mulyo 3. Secodiningr at Culture House	Number of Floors. The fewer the number of floors, the less area to be revitalized	Cultural Heritage Building Values	Existing Survey Accessibility. Ease of access and survey of existing buildings		
1	Mamuning shop house.	5	4	3	8	3	23	9
2	Windiastuti Shop House.	3	5	3	11	5	27	5
3	Tam Yuan Chuan Shop House.	3	4	5	10	3	25	6
4	Anton Hidayat Shop House.	5	3	3	9	5	25	7

5	Berkah Jaya House.	4	2	5	5	3	19	18
6	Kwan Nio Tio Shop House.	5	3	5	16	5	34	1
7	Ketandan Wetan 29 Shop House.	2	2	5	11	2	22	12
8	Ketandan Lor 21 Shop House	1	2	5	11	2	21	13
9	Ketandan Lor 56 Shop House.	4	2	5	6	4	21	14
10	dr. Nugroho House	2	4	3	13	1	23	10
11	UD Liong Shop House	5	2	3	13	5	28	4
12	41 Shop House	5	3	3	13	5	29	3
13	Permata Shop House	3	3	3	6	5	20	15
14	Ketandan Lor 28 Shop House	3	3	3	6	5	20	16
15	Aisha Accesoris Shop House	5	3	3	9	5	23	11
16	Matahari Gold Store Shop House	3	3	3	10	1	20	17
17	Mustika Sakti Gold Store Shop	4	3	3	10	5	25	8
18	Ketandan 5 & 7 Shop House	4	5	3	17	4	32	2

Revitalization priority order:

- (1) Kwan Nio Tio Shop House
- (2) Ketandan 5 and 7 Shop House
- (3) 41 Shop House
- (4) UD. Liong Shop House
- (5) Windyastuti Shop House

Five buildings that are a priority for revitalization are as follows:

A. Kwan Nio Tio Shop House

Kwan Nio Tio Shop House is located on Ketandan Lor Street No. 58. The building consists of one floor and combines Chinese as well as Dutch architectural styles. The typical feature of the Dutch-style Kwan Nio Tio shop-house is the stepped gable and the gable window on the tympanum plane. The upper front part has a geometric pentagon-shaped rooster. Currently, the building facade has four folding doors with bovenlicht above it and is adorned with stained glass. Moreover, the walls of the building are plastered with exposed stone, and there is a galvalume canopy.



Fig 6: Kwan Nio Tio Shop House in 1930 and 1973

Source: Occupants, 2020

According to Fig 5, from the year 1930, the Kwan Nio Tio Shop House facade part has an open terrace as the living room with grand pillars, and the walls appear to be painted in a bright color white. There are doors and windows after the terrace. From 1973, a small part of the house as shown from the side has no visible grand pillars. There is a concrete canopy pulled by a steel cable and an open terrace. The facade damage of Kwan Nio Tio Shop House are as follows (Fig. 7):



Fig. 7: Identification of Facade Damage of the Kwan Nio Tio Shop House

Source: Author, 2023

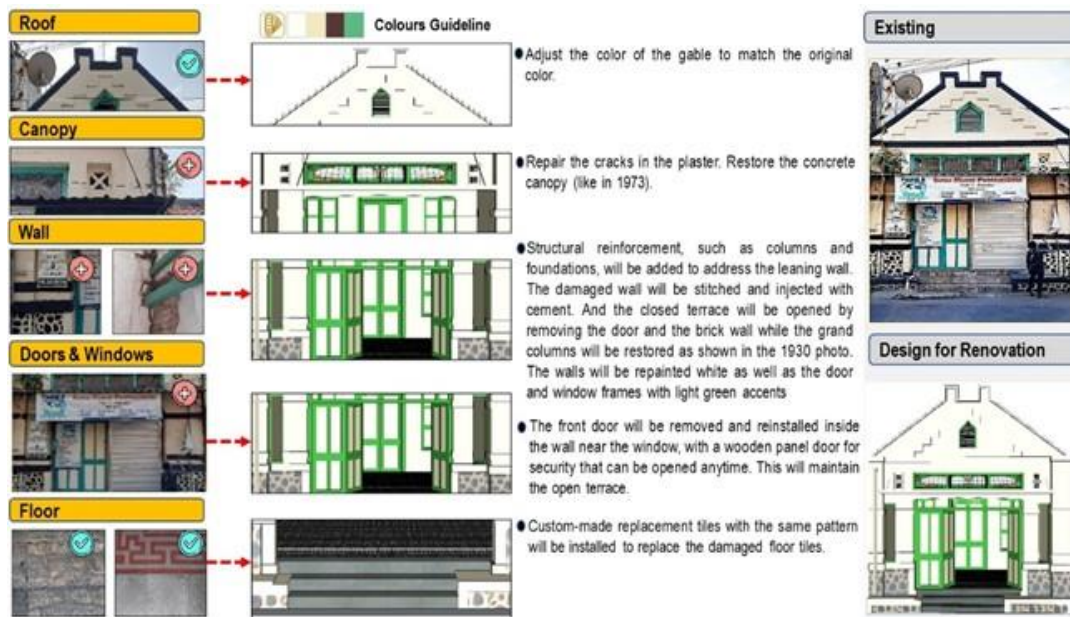


Fig. 8: Proposed Renovation for Kwan Nio Tio Shop House
Source: Author, 2023



Fig 9: Renovation Design for Kwan Nio Tio Shop House
Source: Author, 2023

B. Ketandan 5 and 7 Shop House

Ketandan 5 and 7 Shop House is located on Ketandan Kidul Street. Based on discussions and agreements with the community, this building was included in the list of buildings to be revitalized to replace the Secodiningrat / Tan Jin Sing Capiten House building, which the DIY Culture Office had previously renovated. Ketandan 5 and 7 Shop House is a building with Chinese architectural nuances consisting of 2 (two) floors. The condition of the building, when viewed from the front, is still quite well maintained. In its current state, this building functions as a gold shop. The facade damage identification results of Kebunan 5 and 7 Shop House are shown in Fig 10.

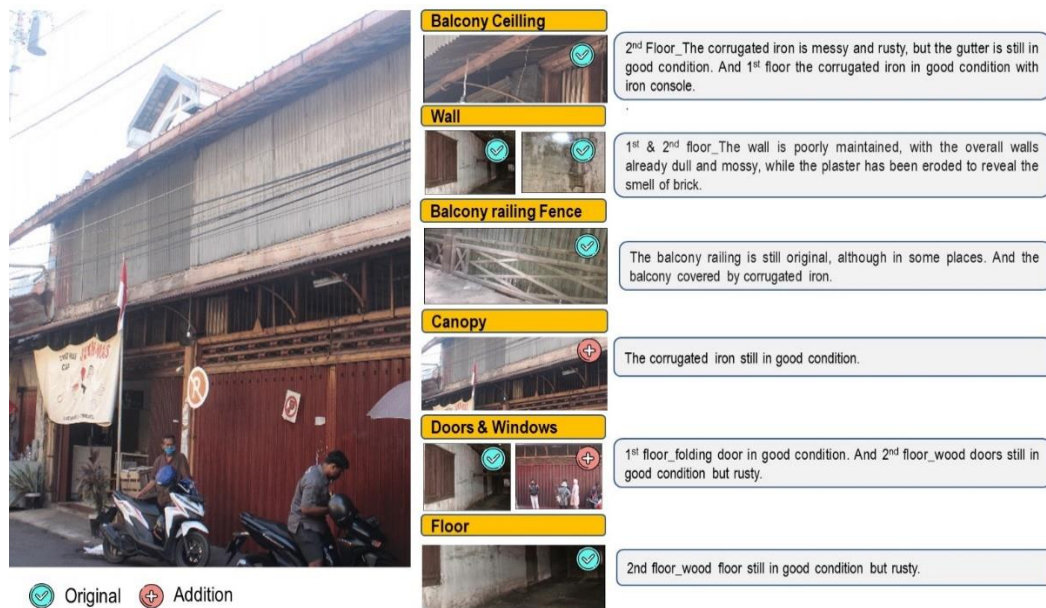


Fig. 10: Identification of Facade Damage of the Ketandan 5 and 7 Shop House

Source: Author, 2023

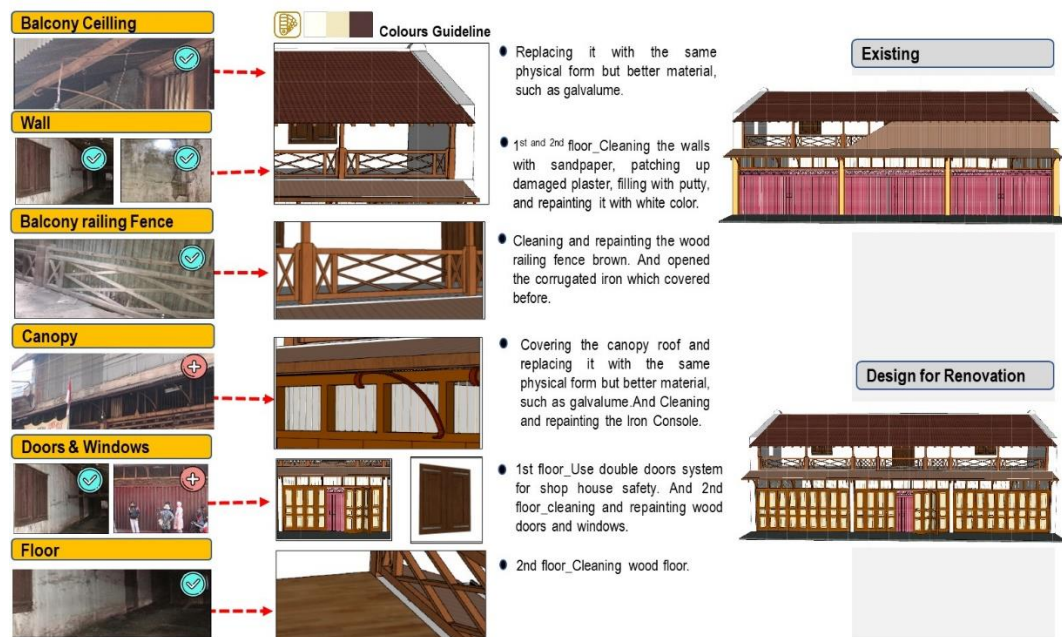


Fig. 11: Proposed Renovation for the Ketandan 5 and 7 Shop House

Source: Author, 2023

C. The Shop House 41

Shop House 41 is located in Hook, between Lor Pasar and Ketandan Kidul Streets. According to the owner (Lauw Kok Tiang), this building, also known as Tan Bing Thay and Yo Ing Lan's house, has been occupied by their family since 1928, which is the first generation to live in the house. This period was contemporaneous with the construction of the Beringharjo market in 1925. Like other houses in the area, the house has a duplex model and two floors, while the roof has a saddle model as well as a ridge with a typical Chinese pattern. There are several variations of floral or flora motifs on the window grilles and each building has an altar offering to ancestors.

Currently, the first floor of Shop House 41 is used as a grocery store, while the second floor is used as a residence and warehouse. The facade damage identification results of Shop House 41 are shown in Fig 12.

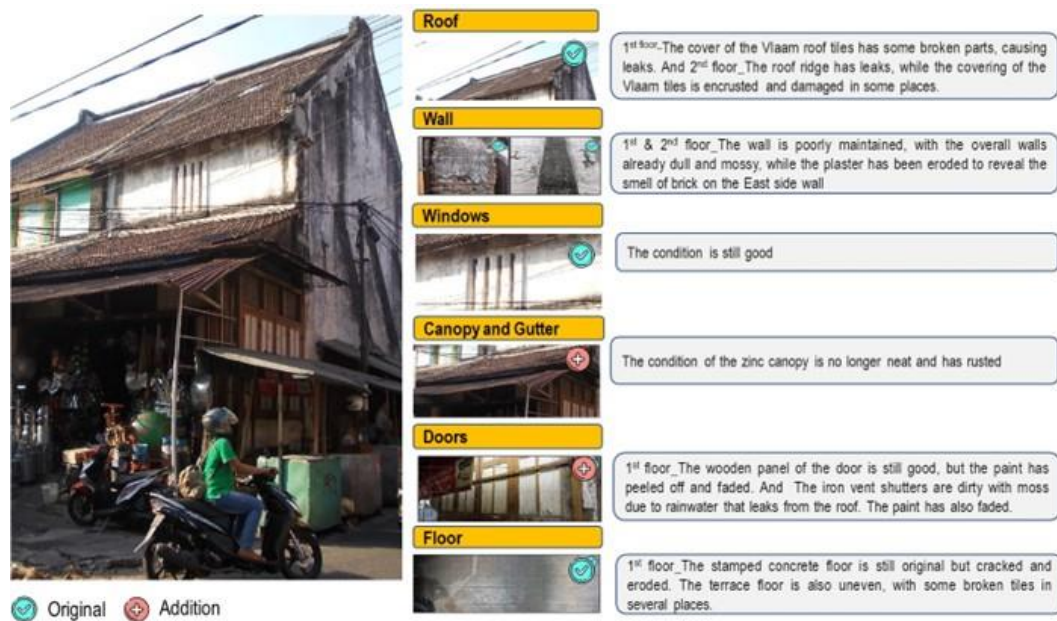


Fig. 12: Identification of Facade Damage of the 41 Shop House
Source: Author, 2023

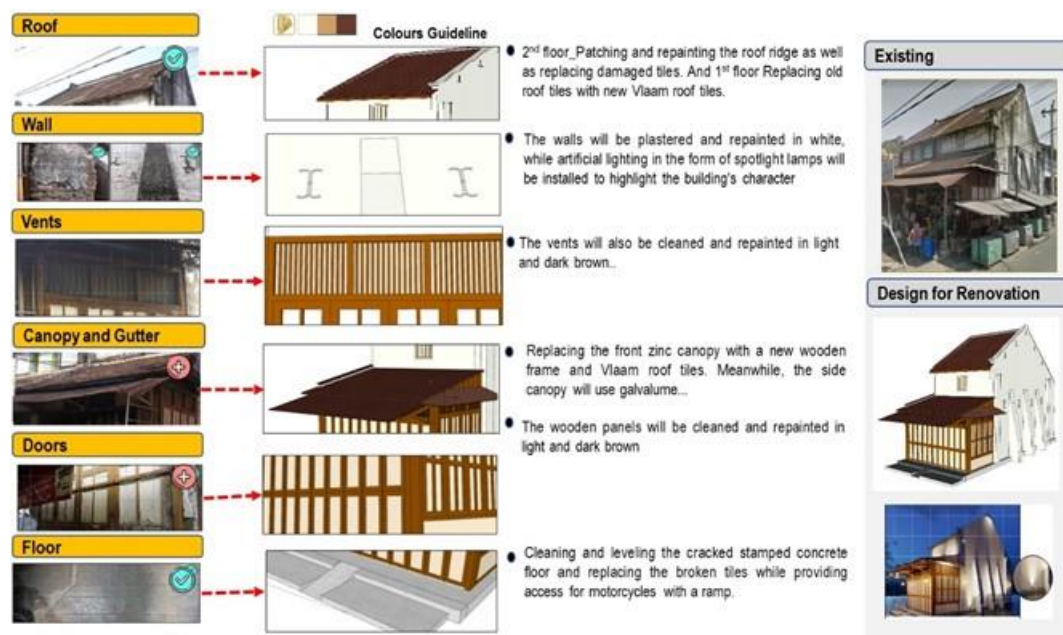


Fig. 13: Proposed Renovation for the 41 Shop
Source: Author, 2023



Fig. 14: Renovation Design for Shop House 41
Source: Author, 2023

D. UD. Liong Shop House

Liong Shop House is located on Lor Pasar Street, with a Chinese architectural style, and consists of two floors. The first floor is a grocery store, while the second is a warehouse. The damages to the Liong Shop House facade is shown in Fig 15.



Fig. 15: Identification of Facade Damage of the Liong Shop House
Source: Author, 2023

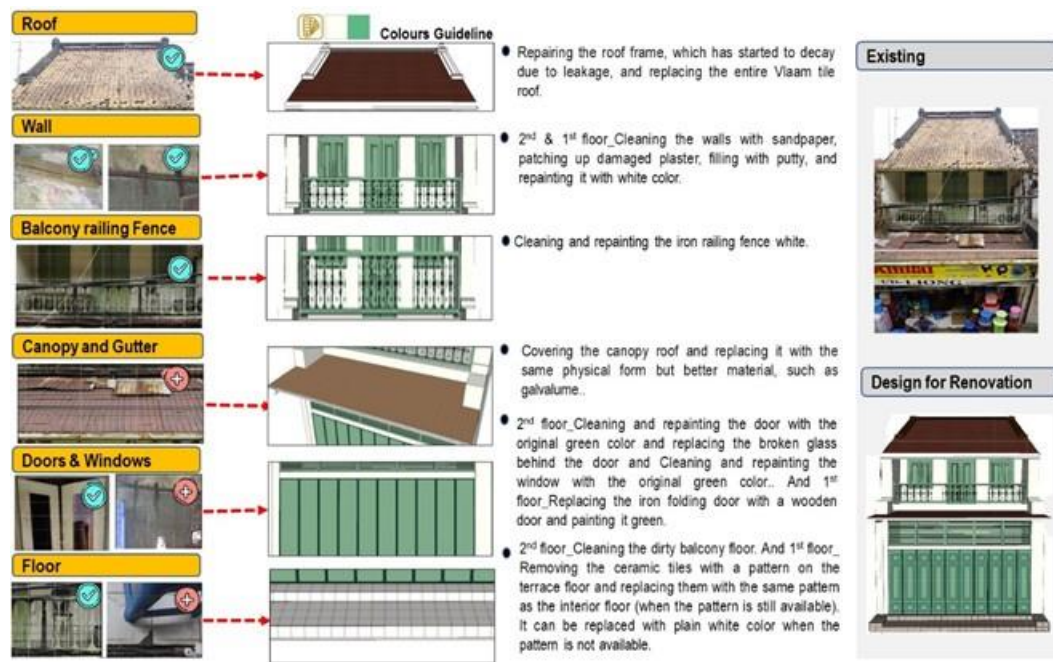


Fig. 16: Proposed Renovation for Liong Shop House

Source: Author, 2023



Fig. 17: Renovation Design for UD.Liong Shop House

Source: Author, 2023

E. Windyastuti Shop House

Windyastuti Arjonosurjo shop house is located on the corner of Ketandan Lor No.7 and Suryaatmajan Street. This building is a fusion of Chinese and Dutch architectural styles. It consists of two floors, with the first currently used as a shop and the second as a warehouse. The facade damage for the Windyastuti Arjonosurjo shop house are shown in Fig 18.



Fig. 18: Identification of Facade Damage of the Windiastuti Shop House
Source: Author, 2023

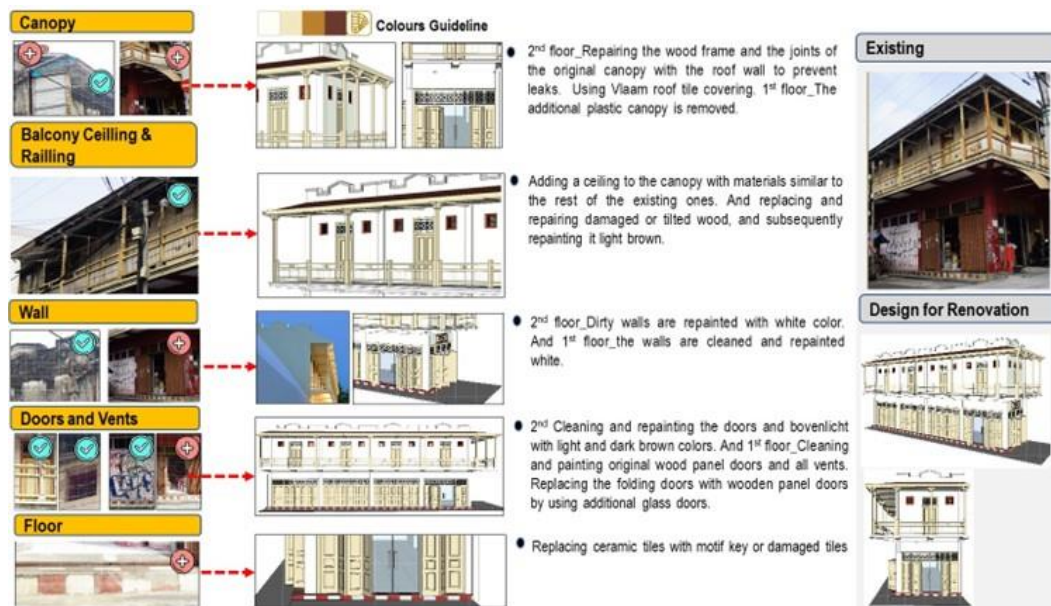


Fig. 19: Proposed Renovation for Windiastuti Shop House
Source: Author, 2023



Fig. 20: Renovation Design for Windiastuti Shop House
Source: Author, 2023

Conclusions

Based on the discussion above, the following conclusions can be made about each building: Revitalization as a preservation effort is made by arranging facilities with Chinese architectural styles. This preservation is one of the strategies for developing the Kraton and Malioboro Areas as tourism areas based on culture and urban life. Based on the values of cultural heritage buildings and their readiness to be revitalized, as well as based on survey results and discussions with local community leaders, five priority buildings were determined, as follows.

- (1) Ketandan 5 and 7 Shop House
- (2) Kwan Nio Tio Shop House
- (3) Dr. Nugroho House
- (4) UD Liong Shop House and
- (5) 41 Shop Houses.

Meanwhile, based on the readiness to be built, they can be ordered as: (1) Kwan Nio Tio Shop House; (2) Ketandan 5 and 7 Shop House; (3) 41 Shop Houses; (4) UD Liong Shop House and (5) Windiastuti Shop House.

Recommendations

Recommendations for Practitioners

Ketandan Village has buildings characterized by Chinese architectural style that has been acculturated with local architecture. Its existence as a Kraton Cultural Heritage Area supports cultural tourism which has made the preservation of the building to be important. Although commercial activities have caused changes in the appearance of the buildings, the characteristics of Chinese architecture, especially on the side walls (*kopwand*), decorations, doors, and windows, can still be found. Therefore, architects are encouraged to maintain building elements as a characteristic of Chinese architecture and highlight them again as core elements.

Recommendations for Further Research

These findings require further research. The factor of changes in the appearance of buildings caused by the increasing trading activities is only one of the factors influencing the dynamics of Chinese architecture in Ketandan Village. As a result of the increasing scarcity of non-durable building materials (wood) and the widespread use of modern materials (lightweight steel), there is an urgent need for research on the use of modern materials in Chinese architecture in Ketandan Village without neglecting the aspect of its philosophical values.

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Issues of Authenticity: Conservation of Chinatown Architecture in Ketandan Village, Yogyakarta, Indonesia

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Abstract

Ketandan also known as the Chinatown is a village in the center of Yogyakarta City inhabited by the Chinese ethnic community. Ketandan is a cultural heritage of Chinese architecture in Yogyakarta and has experienced architectural transformations over the years. Now there are efforts to conserve the significant buildings and therefore, it is important to support the conservation of architecture in the Ketandan village.

This research used a qualitative method which involved identifying authenticity, as well as damage and handling of the building components. Data were collected through field surveys, documentation, and measurement of the buildings. Subsequently, it prepared developing plans for reconstruction and restoration, as well as plans for changes and additions to the components.

~~The results show that five of the buildings researched, namely Dr. Nugroho's House, the Liong, the 41, Kwan Nio Tio, and Windiastuti Arjonosurjo Shop Houses, Kwan Nio Tio have undergone significant changes. These changes include the replacement of concrete canopies with galvalume canopies, the covering of grand pillars with brick walls, the closing of the terrace with a door on the inner wall, and the addition of a rolling door. The Kwan Nio Tio Shop House has suffered the most damage due to the main structure being compromised, causing the walls to tilt.~~

The paper encourages the architects to maintain building elements as a characteristic of Chinese architecture and highlight them again as core elements.

Keywords: Conservation, Chinatown Architecture, Village, Ketandan

Introduction

Ketandan Village is a Chinatown area located in the center of Yogyakarta. The name Ketandan was derived from the word "*ka-tandaan*", which means the home of the tax collectors. In the past, village was the residence of families of tax collectors. Since the reign of Hamengku Buwana I in 1756, a Chinese captain was appointed to manage various needs within the community and to collect tolls, opium as well as market taxes. The financial and economic conditions of Yogyakarta palace significantly improved during the reigns of Hamengku Buwana I and Hamengku Buwana II, mainly due to revenue from toll and market taxes. This indicates that the presence of the Chinese community has a significant role in the economic aspect of Yogyakarta Sultanate. Based on this history, Ketandan is categorized as a *Kraton* Cultural Heritage Area, as stated in the Yogyakarta Special Region Governor Regulation No. 75/KEP/2017, dated March 20, 2017. As part of the *Kraton* Cultural Heritage Area, Ketandan

requires arrangements that complies with the preservation rules. This research is essential in supporting the preservation and arrangement of the building facades in Ketandan in order to make it an example of a Cultural Heritage Area with Chinese architectural characteristics.

The Law No. 11 of 2010 concerning cultural heritage states that preservation is a dynamic effort to maintain cultural heritage and its value through protection, development, and utilization. According to ICOMOS New Zealand Charter (2010), conservation is the process of understanding and caring for places to safeguard cultural heritage values. Conservation is based on respect for the material, association, meaning, and use of a place. It requires a careful approach and necessary work to maintain authenticity and integrity, ensuring that the place and its values can be passed down to future generations. The Burra Charter (1999) defines conservation as the maintenance of a place to preserve its cultural significance. It also forms the basis of preservation activities.

Chinatown in cities usually consist of rows of houses, which also serve as shops (shop houses). These single-roof houses typically do not have a yard, and in the middle of each, is usually an open space without a roof. Chinese houses are characterized by the pointed shape of the roofs at the ends and the carvings on the pillars. Every Chinatown always has one or two temples (*klenteng*). The temple buildings have a distinctive shape and rich Chinese ornamentation. One form of Chinese culture that can still be found in any Chinatown is the building style, emphasizing Chinese culture in the curved roof form. The roof shape found is almost similar to that of southern China. Most Chinese immigrants who came to Indonesia were from the South China Provinces, particularly Guangdong and Fujian (Lilananda, 1998).

Ketandan Village is a historical area with significant old buildings. In general, there are three types of buildings in the village, namely those with Chinese, Dutch, and Javanese architectural styles. This demonstrates the acculturation of the architecture of Ketandan Village. The area is located East of the Tugu - Keraton axis, administratively in Ngupasan Village, Gondomanan District (Fig. 1).



Fig 1: Ketandan Village

Source: Author, 2023

Research Problem

This research aims to determine the importance of preserving architectural identity, both local and resulting from acculturation, especially amidst the development of building functions that are followed by changes in the building forms. The demand for functional development also drives changes to the spatial arrangements and building appearances changes. The research problem is that the efforts of identifying architecture in Ketandan Village, which was created through a combination of traditional Chinese architecture and its acculturation with the local

culture (Javanese) are inadequately understood. This research intends to provide that to help the conservation activities in Ketandan Village.

Theoretical Background

Architectural uniqueness depends on the response and utilization of environmental resources that reflect the relationship between people and Nature. Therefore, architecture reflects the diversity of cultures as well as the relationship between people and Nature. The psychological needs of building occupants are the main factors in designing architectural spaces (Snyder, 1984). These factors are related to how the occupants understand the shape of the space or the building, how they can meet their needs, and how they reflect their lifestyles and symbols. Buildings, as symbols, can serve as a medium for communicating the existence of an individual or a particular social group, whether consciously or unconsciously (Rapoport, 1977).

Heritage buildings have a connection with the core values they embody, depending on the three axes, namely people, place, and time, as well as the environment from which they are formed, with their buildings having the characteristic of a cultured society. There are several strategies to maintain the value of heritage buildings, and this includes the reuse to preserve their architecture as well as aesthetic and economic values (Al-eqaby et al., 2023).

Architectural changes often occur in buildings that require adaptation to environmental, functional, and aesthetic developments. Building changes also provide an opportunity for owners or users of the building to meet their needs through the architectural change processes. It can create dynamic architectural spaces to enhance environmental quality and aesthetics (Asefi, 2012). It also involves economic, social, and cultural factors at varying scales, although fundamentally unique and cannot be generalized, they are related to the added value of the building (Kurniati et al., 2022). Adding contemporary value to heritage buildings can make them part of the global economic development (Barrera, 2013).

In the modern context, the challenge of preserving historical values is the difficulty of connecting tradition and modernity without the support of the local government (Heldak; Soroczynska, 2019). On the other hand, cultural heritage assets owned by the individuals have problems with funding to maintain their existence as cultural heritage buildings (Prasidha et al., 2020). Changes in architectural form do not occur spontaneously but gradually following the needs and desires of the occupants. Traditional architecture can accommodate new functions because it is considered flexible enough to change according to the economic status and needs of the occupants (Hamid & Eltahir, 2014). The economic factors and the occupants' needs are referred to by Sassateli (2007) as a consumerist society because the way of life and social identity are driven by consumptive behavior.

The statements indicate that changes in lifestyle and social conditions can drive the architectural changes made by the owner or occupants of a building. Vernacular architecture can change to accommodate new needs (Jagatramka et al., 2021). In traditional societies and cultures, geographical space is understood as a force in articulating a place as well as existential footing for identity and a sense of ownership (Dayaratne, 2020). Reviving traditional cultural traits, but not in a rigid way, can offer freedom, new ways of building, thinking, and new activities (Dayaratne, 2020). On the other hand, a building's architectural style is often identified as a symbol of a region (Clarke & Crossley, 2000). From these statements, it can be concluded that changes in architectural forms are an effort to accommodate new needs. Spatial adaptation aims to achieve harmony between the occupants and a place believed to improve their lives (Afroz, 2012).

Vernacular architectural forms have become standardized in traditional societies with a long cultural history. In Chinese society tradition, *feng-shui* serves as a means of personalization (self-personification), or a way to express one's individuality in a building suitable only for the occupant (self-identification). Connected to the human cosmology traditional philosophy as the universe center, *feng-shui* makes the location of a suitable building for the ego-centered universe. This central point of the universe can influence the occupant's life in the future. According to cosmological thought, the macrocosm transformation into a microcosm of habitation results in the standard basic plan of the *si-he-yua*. The symmetrical

main axis of a building symbolizes the dynamic balance of the *yin-yang* universe and intersects with the axis mundi line leading to the North-South cardinal points. The symbol of the universe axis connecting the earth and the fixed point of the North star with an imaginary line starts from the courtyard box of *si-he-yuan* type plan.

The square-shaped floor plan represents the earth under the traditional philosophy that the earth is square-shaped, and the sides of the floor plan facing the four cardinal directions visualize the division of space into four segments. Traditional Chinese cosmology depicts the sky as a round dome divided into four segments following the cardinal directions. This concept follows various philosophical beliefs, such as the *yin-yang* philosophy, the five elements of *wu-xing*, the symbols of the dragon-tiger representing the four mythological animals ruling over the sky, and the division according to the 3x3 square *luo-shu*. The floor plan of a simple 3-Jian dwelling is the basic module of folk housing, with an odd number of units usually taken to maintain symmetry along the main axis. A simple house plan is commonly referred to as "one empty room and two chambers" (*yi-tang-er-nei*), or "one bright and two dark" (*yi-ming-liang-an*) (Zhou et. al, 2002).

One important characteristic of traditional Chinese buildings is that they are constructed on a raised podium, with the surface level higher than the surrounding ground level. The height of the *tai* surface is related to the building function. In traditional Chinese architecture, building materials, such as wood, bamboo, and ceramics are mainly non-permanent. Using these materials reflects the understanding that buildings are not eternal, just like people with limited lifespans. More permanent materials, such as stone, are used only in tomb buildings, with the belief that the human spirit will continue to live on after death.

The upper part of the building is made of wood. The wooden frame is a strong and stable self-standing structure. The walls are partitions and do not bear the structural load (non-bearing all, curtain wall). The roof is a massive construction. The use of materials tend to be over-designed in dimensions because Chinese architecture relies heavily on the weight of the construction mass to obtain stability and strength. The mass weight in the structure is expected to provide resistance to wind and earthquakes. In traditional Chinese building construction, wind bracing frames are not commonly known, nor are triangular *vakwerk* rafters that are known today. Wooden construction has proven to withstand major earthquakes due to the highly flexible knots in the wooden structure. From the historical research of Chinese architecture, it turns out that the dimensions evolution of *dou-gung* and columns have become more economical in terms of materials (Liang, 2005).

In the construction of the saddle roof with *kopwand*, the gable wall, and the *shan-qiang* wall also function as a firewall. The side edges of the wall are made much higher than the roof surface next to it, and this shape aims to prevent the spread of fire through the wooden roof structure when a neighboring building catches fire. The addition of height to the side wall (*kopwand*, *shan-qiang*) is higher than the *wuwungan* line and the roof plane. Usually, the top of the wall is decorated (see Figure 2). The decorations at the end of the *shan-hua* wall differentiate the social status of the occupants.

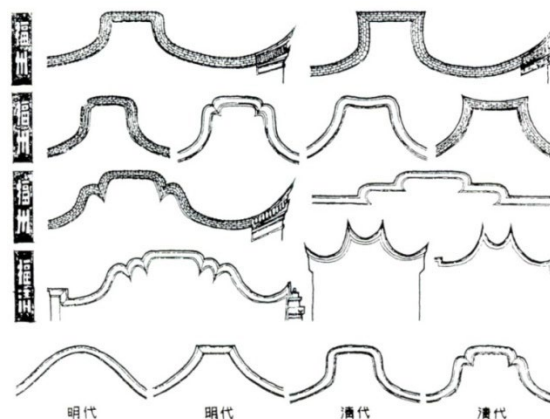
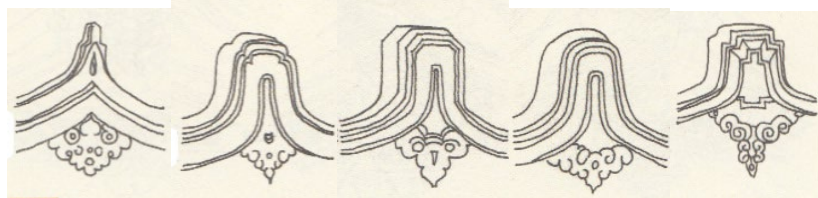


Fig 2: Shape of the side wall (*kopwand*)

Source: Knapp, in Kustedja (2014)

The variety of ornaments found on the side walls symbolize beliefs and good hopes (immortal, Buddhist) (Fig.3).

**Fig 3:** Symbols of fire/south, metal/north, wood/east, water/west, and earth/center Source:

Knapp, in Kustedja, 2014

Source: Knapp, in Kustedja, 2014

In Chinatown Semarang, several buildings represent early and distinct Chinese architecture. The roofs have a saddle shape and are circular. The *Tou kung* console is visible on the support of the second-floor foyer, and there is a curtain purlin on the roof terrace (Sudarwani et al., 2023).

Research Method

This qualitative research was conducted in Ketandan village, Yogyakarta City, Indonesia. The data were obtained through observation and interviews (Leedy; Ormrod, 2001), and photo/documentation. The research employed direct observation of building forms and various ornaments. The interviews were conducted to obtain information about the history of the building from the owners/occupants. A documentary survey was used for deductive reflection of observation results. Documentation of five buildings was carried out to describe the condition of the building, the changes that occurred, and the elements left unchanged.

Evaluation

Berdasarkan Master Plan for Maintenance and Development of Ketandan Village Cultural Heritage Area, Dinas Kebudayaan Daerah Istimewa Yogyakarta Tahun 2018 ada 18 (delapan belas) bangunan yang direncanakan untuk direvitalisasi. Bangunan tersebut yaitu: (1) Mamuning Shop House; (2) Windiastuti Shop House; (3) Tam Yuan Chuan Shop House; (4) Anton Hidayat Shop House; (5) Berkah Jaya Shop; (6) Kwan Nio Tio Shop House; (7) Ketandan Wetan No.29 Shop House; (8) Ketandan Lor No.21 Shop House; (9) Ketandan Lor No.56 Shop House; (10) dr. Nugroho Shop House; (11) Secodiningrat/Tan Jin Sing Capiten House; (12) UD.Liong Shop House; (13) 41 Shop House; (14) Permata Gold Store Shop House; (15) Ketandan Kidul No.2B Shop House; (16) Aisha Cosmetics Shop House; (17) Matahari Gold Store Shop House; (18) Mustika Sakti Gold Store Shop House.

Tokoh masyarakat Kawasan Ketandan memberi beberapa masukan yaitu: (1) nilai sejarah, umur bangunan, kedekatan jarak antar bangunan yang cukup dekat, bentuk dan keaslian bangunan. (2) pertimbangkan keaslian bangunan, material dan warna serta kekhasan lainnya yang ada. Selain itu jangan meniadakan yang ada dan jangan mengadakan yang ada. (3) Berdasar nilai-nilai tersebut maka mempertimbangan Ketandan 5 and 7 Shop House untuk menggantikan rumah Secodiningrat atau Rumah Kapiten Tan Jin Sing dikarenakan rumah Secodiningrat sudah direvitalisasi oleh Dinas Kebudayaan DIY. Dan (4) Rumah Ketandan 22,24,26 dimasukkan dikarenakan memiliki sejarah yang terkait rumah Secodiningrat yang dahulu kala sebagai istal kuda Secodiningrat. Setelah berdiskusi maka diputuskan hanya Ketandan 5 and 7 Shop House yang bisa masuk ke dalam daftar dan Rumah Ketandan 22,24,26 tidak dimasukkan dikarenakan kesulitan menghubungi pemilik rumah.



Fig 4: Discussion with occupant and public figure at Ketandan Village
Source : author, 2023

Skala penilaian dibuat untuk menentukan prioritas pembangunan 18 (delapan belas) bangunan yang ada didalam daftar. Dengan menggunakan dasar pertimbangan pelestarian oleh Rahardjo (2013) mengenai penilaian, tipologi nilai, dan pemeringkatan untuk pengelolaan cagar budaya serta masukan dari masyarakat Ketandan. Maka dapat dijelaskan sebagai berikut: (1) Nilai sejarah terdiri dari tokoh dan peristiwa. (2) Nilai ilmu pengetahuan terdiri dari penemuan baru, munculnya ragam baru, penerapan teknologi baru, dan munculnya spesies baru. (3) Nilai kebudayaan terdiri dari identitas dan seni. (4) Nilai pendidikan dijelaskan sebagai benda memiliki potensi untuk dapat memberikan pengetahuan dan penanaman nilai moral bagi anak-anak dan dewasa. (5) Nilai politik, peristiwa-peristiwa penting sejarah yang terjadi di objektinggalan sejarah dan purbakala dapat dianggap penting bila memiliki kecocokan dengan prioritas politik masa kini. Makna penting tersebut dapat digunakan dalam upaya meningkatkan perhatian publik dalam upaya perlindungan dan pelestarian. (6) Nilai ekonomi terdiri dari nilai fungsional dan revitalisasi. Dan (7) Nilai keutuhan atau nilai integritas terdiri dari desain, tata lingkungan fisik, bahan, material, dan pengerjaan.

Prioritas pembangunan didasarkan kepada skala penilaian: 1. Sangat Rendah; 2. Rendah; 3. Sedang; 4. Tinggi; 5. Sangat Tinggi. Berikut nilai-nilai yang digunakan:

1. Nilai-nilai Bangunan Cagar Budaya

Table 1: Prioritas Pembangunan Berdasarkan Nilai-Nilai Bangunan Cagar Budaya

Sumber: Author, 2023

Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Mamuning Shop House	Windyastuti Shop House	Tam Yuan Chuan Shop House	Anton Hidayat Shop House	Berkah Jaya House	Kwan Nio Tio Shop House	Ketandan Wetan 29 Shop House	Ketandan Lor 21 Shop House	Ketandan Lor 56 Shop House	dr. Nugroho House	UD Liong Shop House	41 Shop House	Permata Shop House	Ketandan Lor 28 Shop House	Aisha Accesoris Shop House	Matahari Golld Store Shop	Mustika Sakti Gold Store Shop	Ketandan 5 & 7 Shop House
Nilai Penting Memiliki sejarah, ilmu pengetahuan, Pendidikan, agama dan kebudayaan yang penting	1	1	1	1	1	3	1	1	1	1	2	2	1	1	1	1	1	5

Keaslian dan Integrity Elemen-elemen fasad masih asli belum banyak tambahan	3	2	4	3	1	3	3	4	1	3	4	4	1	1	2	3	3	4
Kekhasan Bentuk dan Fasad Adanya elemenarsitek tural yang khas	2	4	3	3	2	5	4	4	2	5	5	5	2	2	4	4	4	5
Kondisi Kerusakan Struktur Kondisi struktur fasad sudah tidak layak	2	4	2	2	1	5	3	2	2	4	2	2	2	2	2	2	2	3
Total Scoring	8	11	10	9	5	16	11	11	6	13	13	13	6	6	9	10	10	17
Prioritas Pembangunan	7	4	5	6	7	2	4	4	8	3	4	5	8	8	6	5	5	1

2. Kesiapan terbangun

Table 2: Skala Prioritas Pembangunan Berdasarkan Kesiapan Terbangun
Sumber: Author, 2023

Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Mamuning Shop House	Windyastuti Shop House	Tam Yuan Chuan Shop House	Anton Hidayat Shop House	Berkah Jaya House	Kwan Nio Tio Shop House	Ketandan Wetan 29 Shop House	Ketandan Lor 21 Shop House	Ketandan Lor 56 Shop House	dr. Nugroho House	UD Liang Shop House	41 Shop House	Pernata Shop House	Ketandan Lor 28 Shop House	Aisha Accesoris Shop House	Matahari Golld Store Shop House	Mustika Sakti Gold Store Shop	Ketandan 5 & 7 Shop House
Fungsi Masih difungsikan dengan baik sebagai rumah atau toko	5	3	3	5	4	5	2	1	4	2	5	5	3	3	5	3	4	4
Lokasi Dekat dengan:	4	5	4	3	2	3	2	2	2	4	2	3	3	3	3	3	3	5

1. kantor Gubernur Daerah Istimewa Yogyakarta																		
2. Jalan Margo Mulyo																		
3. Rumah Budaya Secodiningrat																		
Jumlah Lantai Semakin sedikit jumlah lantai semakin sedikit area pengerjaan	3	3	5	3	5	5	5	5	5	3	3	3	3	3	3	3	3	3
Nilai-Nilai Bangunan Cagar Budaya	8	11	10	9	5	16	11	11	6	13	13	13	6	6	9	10	10	17
Aksesibilitas Survei Eksisting Kemudahan mengakses dan survei bangunan eksisting	3	5	3	5	3	5	2	2	4	1	5	5	5	5	5	1	5	4
Total Scoring	23	27	25	25	19	34	22	21	21	23	28	29	20	20	23	20	25	32
Prioritas Pembangunan		5				1					4	3						2

Sumber: Author, 2023

Five buildings that are a priority for revitalization are as follows:

A. Kwan Nio Tio Shop House

Kwan Nio Tio Shop House is located on Ketandan Lor Street No. 58. The building consists of one floor and combines Chinese as well as Dutch architectural styles. The typical feature of the Dutch-style Kwan Nio Tio shop-house is the stepped gable and the gable window on the tympanum plane. The upper front part has a geometric pentagon-shaped rooster. Currently, the building facade has four folding doors with bovenlicht above it and is adorned with stained glass. Moreover, the walls of the building are plastered with exposed stone, and there is a galvalume canopy.



Fig 5: Kwan Nio Tio Shop House in 1930 and 1973

Source: Occupants, 2020

According to Fig 5, from the year 1930, the Kwan Nio Tio Shop House facade part has an open terrace as the living room with grand pillars, and the walls appear to be painted in a bright color white. There are doors and windows after the terrace. From 1973, a small part of the house as shown from the side has no visible grand pillars. There is a concrete canopy pulled by a steel cable and an open terrace. The facade damage of Kwan Nio Tio Shop House are as follows (Fig.6):

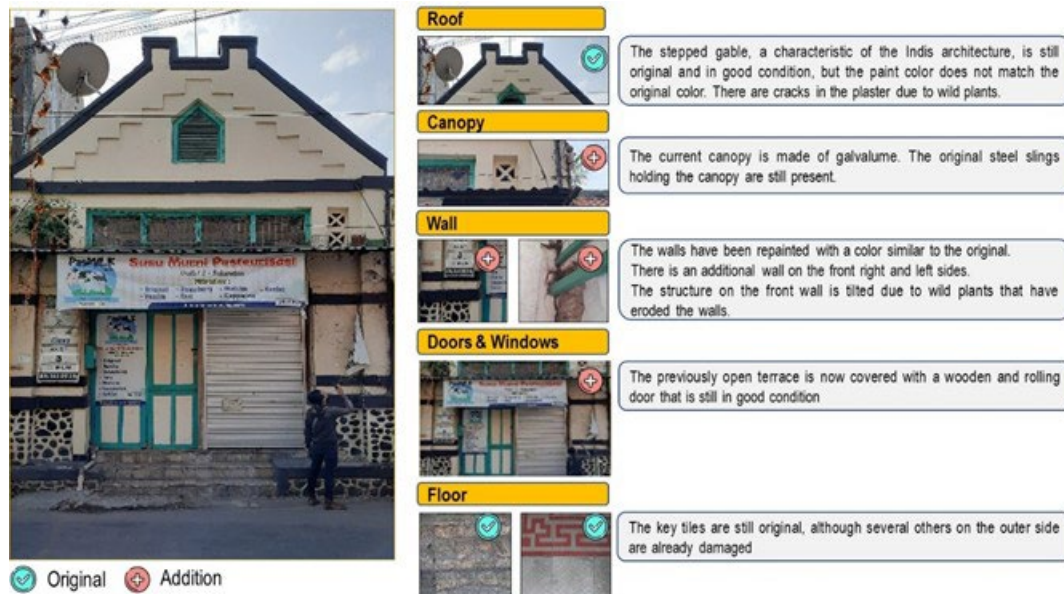


Fig 6: Identification of Facade Damage of the Kwan Nio Tio Shop House

Source: Author, 2023

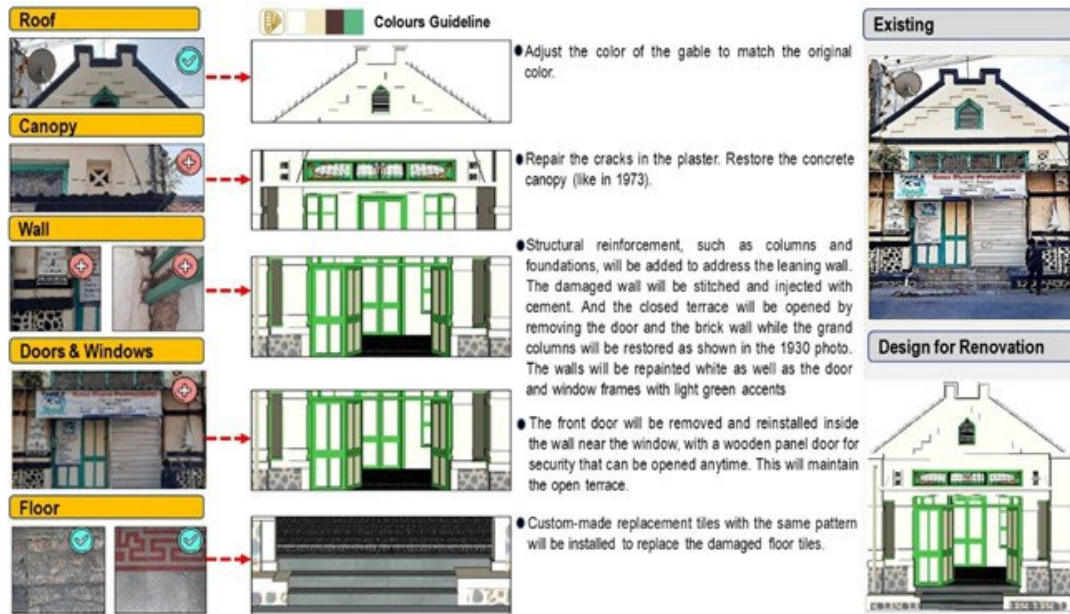


Fig 7: Proposed Renovation for Kwan Nio Tio Shop House
Source: Author, 2023



Fig 8: Renovation Design for Kwan Nio Tio Shop House
Source: Author, 2023

B. Ketandan 5 and 7 Shop House

Ketandan 5 and 7 Shop House is located in Ketandan Kidul Street. Berdasarkan hasil diskusi dan kesepakatan dengan masyarakat bangunan ini kemudian dimasukkan ke dalam daftar bangunan yang akan direvitalisasi menggantikan bangunan Secodiningrat / Tan Jin Sing Capiten House yang sudah terlebih dahulu direnovasi oleh Dinas Kebudayaan DIY.

Ketandan 5 and 7 Shop House merupakan bangunan bernuansa arsitektur Cina yang terdiri dari 2 (dua) lantai. kondisi bangunan jika dilihat dari depan masih cukup terawat. untuk kondisi saat ini, bangunan ini difungsikan sebagai toko emas. The facade damage identification results of Ketandan 5 and 7 Shop House are shown in Fig 9.

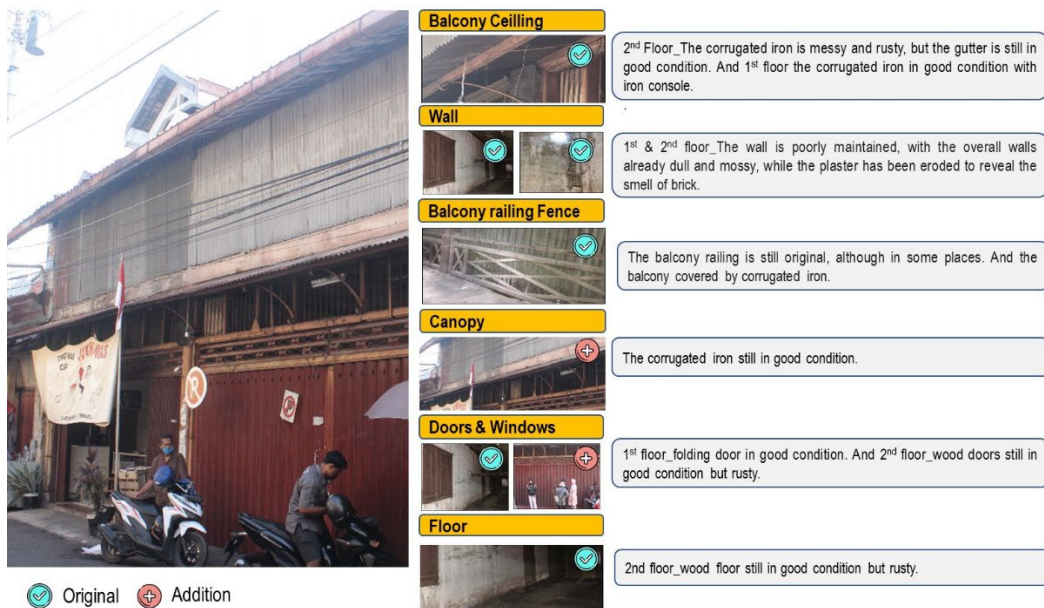


Fig 9: Identification of Facade Damage of the Ketandan 5 and 7 Shop House

Source: Author, 2023

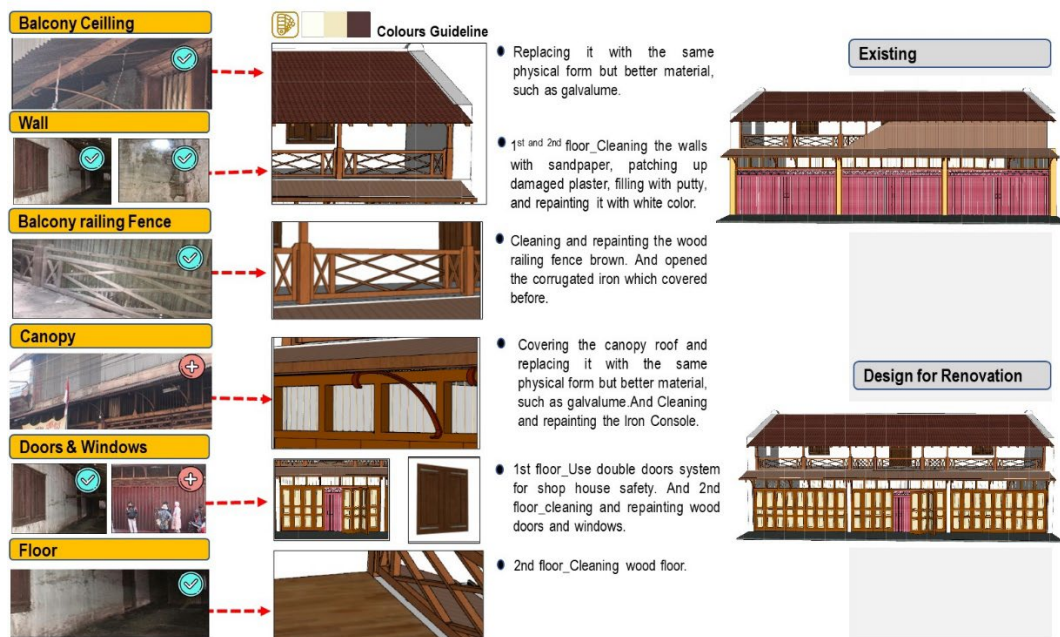


Fig 10: Proposed Renovation for the Ketandan 5 and 7 Shop House

Source: Author, 2023

C. The Shop House 41

Shop House 41 is located in Hook, between Lor Pasar and Ketandan Kidul Streets. According to the owner (Lauw Kok Tiang), this building, also known as Tan Bing Thay and Yo Ing Lan's house, has been occupied by their family since 1928, which is the first generation to live in the house. This period was contemporaneous with the construction of the Beringharjo market in 1925. Like other houses in the area, the house has a duplex model and two floors, while the roof has a saddle model as well as a ridge with a typical Chinese pattern. There are several variations of floral or flora motifs on the window grilles and each building has an altar offering to ancestors.

Currently, the first floor of Shop House 41 is used as a grocery store, while the second floor is used as a residence and warehouse. The facade damage identification results of Shop House 41 are shown in Fig 11.

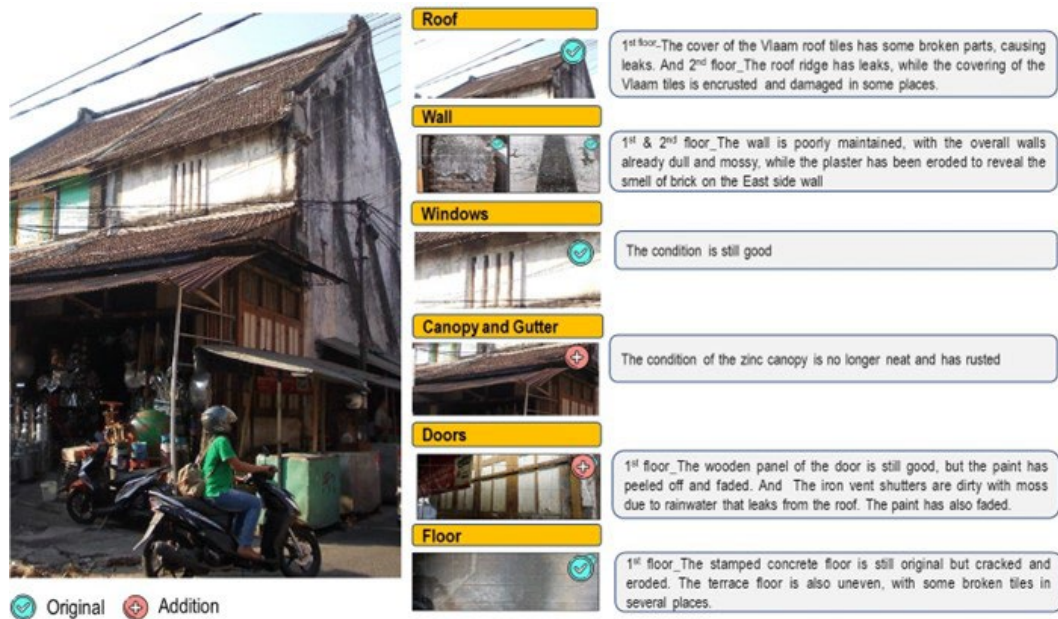


Fig 11: Identification of Facade Damage of the 41 Shop House

Source: Author, 2023

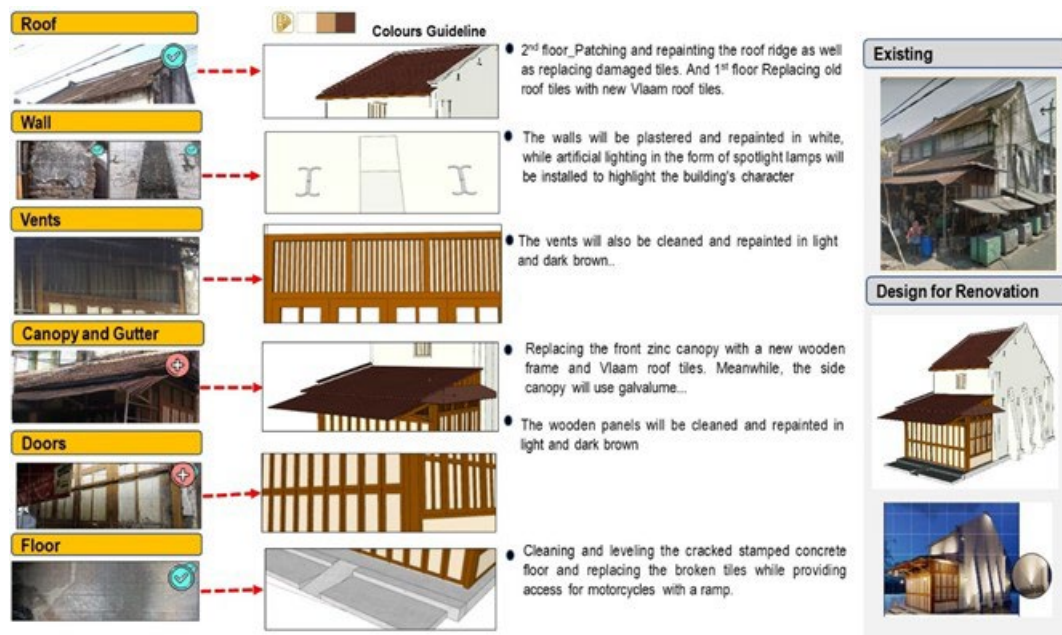


Fig 12: Proposed Renovation for the 41 Shop

Source: Author, 2023



Fig 13: Renovation Design for Shop House 41

Source: Author, 2023

D. UD. Liong Shop House

Liong Shop House is located on Lor Pasar Street, with a Chinese architectural style, and consists of two floors. The first floor is a grocery store, while the second is a warehouse. The damages to the Liong Shop House facade is shown in Fig 14.



Fig 14: Identification of Facade Damage of the Liong Shop House

Source: Author, 2023

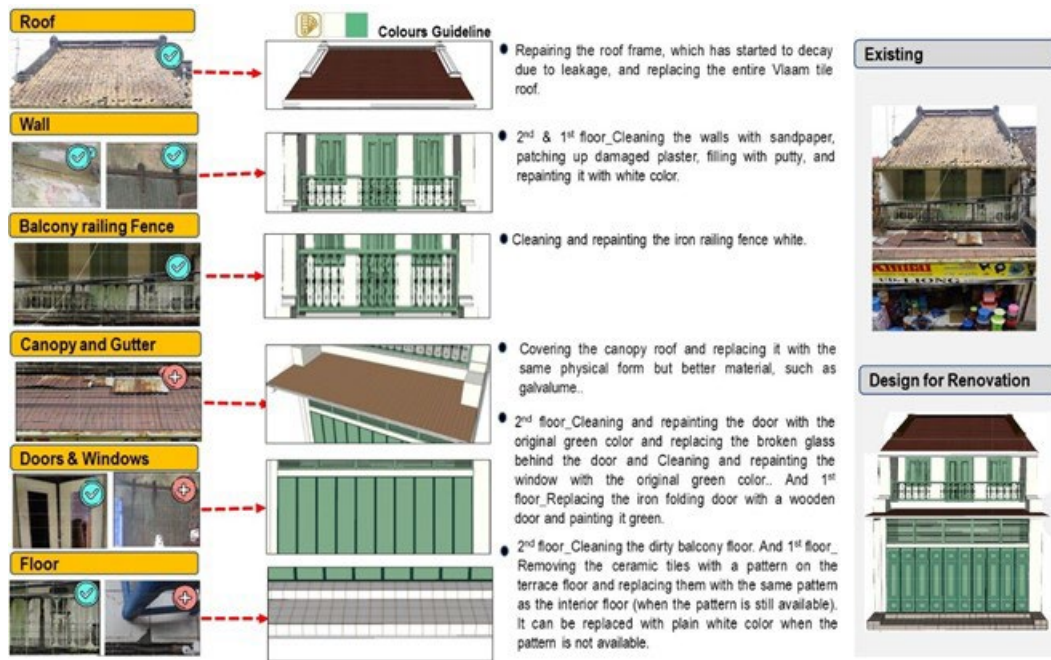


Fig 15: Proposed Renovation for Liong Shop House

Source: Author, 2023



Fig 16: Renovation Design for UD.Liong Shop House

Source: Author, 2023

E. Windyastuti Shop House

Windiastuti Arjonosurjo shop house is located on the corner of Ketandan Lor No.7 and Suryaatmajan Street. This building is a fusion of Chinese and Dutch architectural styles. It consists of two floors, with the first currently used as a shop and the second as a warehouse. The facade damage for the Windiastuti Arjonosurjo shop house are shown in Fig 17 .



Fig 17: Identification of Facade Damage of the Windiastuti Shop House
Source: Author, 2023

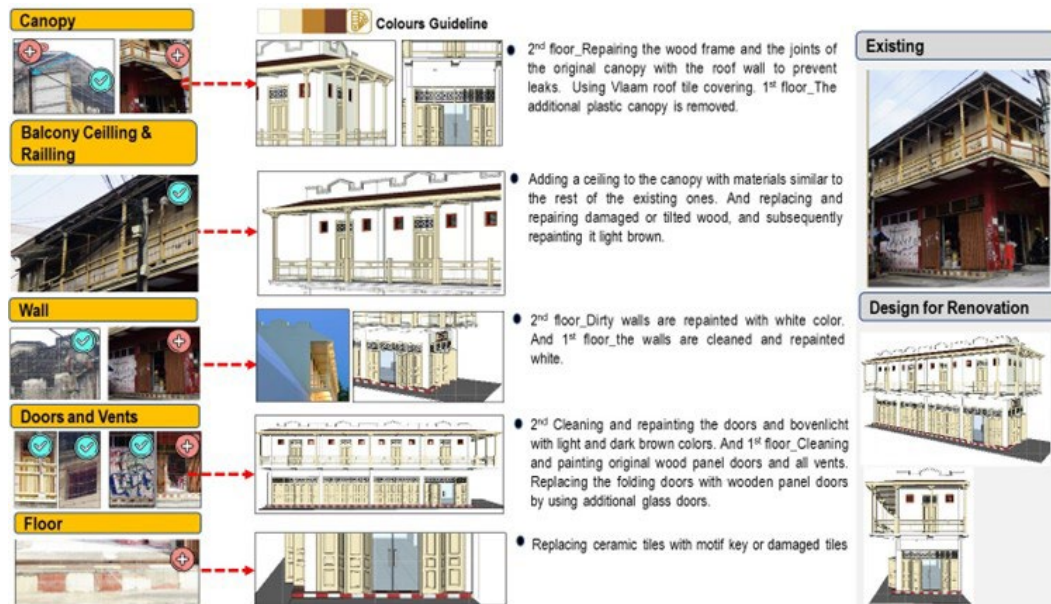


Fig 18: Proposed Renovation for Windiastuti Shop House
Source: Author, 2023

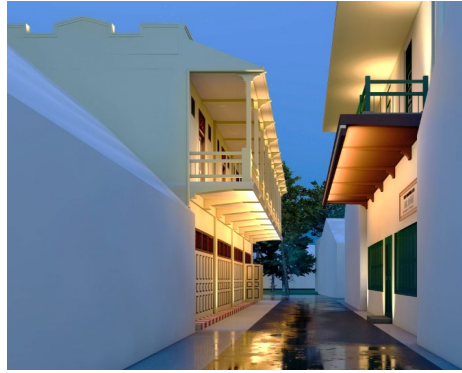


Fig 19: Renovation Design for Windiastuti Shop House

Source: Author, 2023

Conclusion

Based on the discussion above, the following conclusions can be made about each building:

1. Liong Shop House

The Liong shop house still has a high level of authenticity, with the only addition being a zinc canopy on the terrace to protect merchandise underneath and additional folding doors.

- a. The minor renovation carried out includes waterproofing the roof ridge, cleaning dirty tiles, cleaning and repainting balcony railings, replacing broken glass doors, repainting all doors, windows, and damaged ceramic tiles, as well as replacing the folding doors with wooden panel doors.
- b. The moderate renovation includes replacing the entire roof tiles, replacing the canopy with galvalume, repairing damaged walls, and repainting all walls.
- c. No major renovation has been carried out.

2. Dr. Nugroho's House

The authenticity level of Dr. Nugroho's house is still high, with the only additions being a zinc canopy on the terrace and iron doors.

- a. The minor renovation carried out includes cleaning dirty tiles, cleaning and repainting wooden railings and columns, repainting walls, doors and windows, cleaning vents, as well as replacing cracked and damaged tiles.
- b. The moderate renovation includes replacing the entire roof tiles and curved wooden roof support beams, replacing the canopy with galvalume, repairing cracked and damaged walls, as well as replacing the first floor doors with wooden panel doors.
- c. No major renovation was carried out.

3. Shop House 41

The authenticity level of shop house 41 is still high, with the only addition being a zinc canopy on the terrace to protect the merchandise underneath.

- a. The minor renovation carried out includes repainting existing windows, cleaning and repainting wooden panel doors, vent grilles, and walls, as well as repairing damaged floors.
- b. The moderate renovation includes repairing the roof ridge and replacing the entire roof tiles, replacing the canopy with galvalume, as well as repairing damaged walls.
- c. No major renovation has been carried out.

4. Kwan Nio Tio Shop House

Kwan Nio Tio shop house has undergone more changes compared to other buildings, and this includes the addition of a galvalume canopy instead of a concrete canopy, the closing of the magnificent pillars with brick walls, the closing of the terrace with doors on

~~the inside walls, as well as the addition of rolling doors. However, this shop house has sustained the highest damage to its main structure.~~

- ~~a. The minor renovation carried out includes repainting the stepped gable, walls, doors and windows, as well as replacing damaged tiles.~~
- ~~b. The moderate renovation includes repairing the roof caused by wall cracks, restoring the brick walls to their original shape, as well as dismantling and returning the front doors to the interior walls.~~
- ~~c. The major renovation includes replacing the galvalume canopy with reinforced concrete, as well as adding structural reinforcement to the tilted walls with columns and foundations.~~

5. Windiastuti Arjonosurjo Shop House

~~The Windiastuti Arjonosurjo shop house has a high authenticity level, with the only addition being a galvalume canopy as well as a light steel frame to protect the old canopy from leaks and folding doors as the main entrance to the shop.~~

- ~~a. The minor renovation carried out includes repainting balcony railings, cleaning and repainting walls, original wooden doors, and windows, removing the existing canopy, as well as replacing damaged tiles.~~
- ~~b. The moderate renovation includes repairing the balcony canopy, replacing and installing a balcony ceiling, repairing and replacing damaged wooden railings, as well as replacing the folding doors with wooden panel doors that have glass.~~
- ~~c. No major renovation was carried out.~~

Recommendations

Recommendations for Practitioners

Ketandan Village has buildings characterized by Chinese architectural style that has been acculturated with local architecture. Its existence as a Kraton Cultural Heritage Area supports cultural tourism which has made the preservation of the building to be important. Although commercial activities have caused changes in the appearance of the buildings, the characteristics of Chinese architecture, especially on the side walls (*kopwand*), decorations, doors, and windows, can still be found. Therefore, architects are encouraged to maintain building elements as a characteristic of Chinese architecture and highlight them again as core elements.

Recommendations for Further Research

These findings require further research. The factor of changes in the appearance of buildings caused by the increasing trading activities is only one of the factors influencing the dynamics of Chinese architecture in Ketandan Village. As a result of the increasing scarcity of non-durable building materials (wood) and the widespread use of modern materials (lightweight steel), there is an urgent need for research on the use of modern materials in Chinese architecture in Ketandan Village without neglecting the aspect of its philosophical values.

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