Malaysian Journal of Sustainable Environment
Vol.12.No.1 (2025) 285-312
doi: 10.24191/myse.v12i1.2455

ADAPTIVE REUSE OF COLONIAL HOUSES INTO CAFÉS IN BANDA ACEH

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Received: 25 September 2024
Accepted: 16 November 2024
Published: 31 March 2024

ABSTRACT

Aceh was one of the areas that experienced Dutch colonisation between 1873 and 1942. This period of Dutch rule was a significant one for the people of Aceh. The Dutch colonial period in Aceh is evidenced by the surviving relics of government bureaucratic buildings and colonial-style residences that were successfully established. The Dutch architectural heritage has been designated a cultural heritage in Banda Aceh. However, in accordance with the progression of time and the growing necessity for additional space, a considerable number of colonial-era residential structures have been dismantled. Presently, the only remaining vestiges of colonial-era residences are government-owned buildings. One method of preserving a building is through adaptive conservation, which involves reusing the building while making interior and exterior changes and maintaining the original shape and structure. Two cafés in Banda Aceh City have been created through the adaptive reuse of colonial residential houses. Two coffee houses, Café T36 Coffee and SOBA Café, are situated in the vicinity of Taman Sari. The objectives of this research are to identify and examine the implementation of the concept of adaptive reuse in colonial residential buildings that have been converted into cafés. The study was conducted using a descriptive qualitative method based on the philosophy of postpositivism, with data source triangulation techniques (on-site observation and in-depth structure interview) and theories that aim to analyse various perspectives. The findings demonstrate that the primary structural components, such as the frame and

exterior facade, are preserved, while the interior and installation have been modified to align with the new functional requirements. The incorporation of historical elements, such as those reflective of the colonial architectural style, within the interior design can effectively convey the past. This can be achieved through the use of furniture styles, materials, floor patterns, wall ornaments, and ceiling designs that evoke the colonial era. In terms of spatial configuration, one of the most significant alterations is the creation of a more expansive public area to accommodate commercial activities.

Keywords: *Conservation, Adaptive Reuse, Colonial House, Café, Banda Aceh*

INTRODUCTION

As an old city, Banda Aceh City has several types of old buildings from different eras in which one of them being from the Dutch colonial. After the 2004 Tsunami Disaster, Banda Aceh govermment has taken serious conservation of old buildings (Clarke et al., 2018). Several public buildings have been listed and conserved by not only the government but also the community. Old buildings are considered sustainable as long as they are in their original condition and maintain continuity so they are protected from destruction or damage (Nurmala, 2003). Preserving historical buildings is an important strategy in urban development because such preservation actions ensure the sustainability of cultural values along with the development process carried out by humans (Sofiana et al., 2014). Modifying colonial houses while utilizing them for business activities and preserving them is considered an effort driven by the awareness of an appreciation for the distinctive colonial residential architecture, namely Indies architecture (Ardiyanto et al., 2017).

Adaptive reuse has become a significant and popular approach, in which modifications are allowed, but the form of the building is still 'unchanged' or maintained as much as possible (Dewi, 2017). Conservation efforts that are currently being conducted include changing the function of buildings into cafés, offices, or even schools. This is known as the adaptive reuse approach, which can be interpreted as working on existing buildings, repairing or restoring them for continued use and new functions related to

current needs (Plevoets & Van Cleempoel, 2011).

Based on several previous studies, the application of the adaptive reuse approach has been widely studied, but not much has been done in Banda Aceh. A study of adaptive reuse of 1960s-era residential houses with a vernacular concept based on environmental and spatial aspects found that in adapting the house to become a café, kitchen and toilet, much of the money was retained from the old house (Pasha et al., 2021). Additionally, Humaidy (2022) found that in the adaptive reuse of old buildings into museums, aspects of the authenticity of the façade and spatial arrangement are maintained. The two studies show that the process of converting colonial buildings into new places (coffee houses and museums) can accommodate social and economic activities through interventions and changes in components that occur through additions, eliminations and modification.

Thus, this research aims to provide insight into how adaptive reuse is undertaken by showing the adaptation of spatial arrangements and facades of the houses and to show the users' perceptions about the adaptive reuse of colonial houses as cafes. It hopes to contribute to the understanding of adaptive reuse approach for conservation and attracting visitors. This paper investigated two examples of colonial-style houses of cafes: café T36 Coffee, located at Jalan Teuku H. Abdullah Ujung Rimba, Kampung Baru; and Soba Café, at Jalan Teuku Abu Lam U, Kampung Baru, Banda Aceh. These houses represent the development of banda aceh architecture during the colonial period in the 1930s. The alterations to these two cafés are intended to render the building adaptable to new functions by optimising the existing potential of the old house.

LITERATURE REVIEW

Building Conservation

Heritage conservation has been extensively discussed in academic literature as a vital practice for maintaining the cultural, historical, and architectural integrity of societies. Scholars like Lowenthal (1996) argue that heritage sites are essential for preserving the collective memory of communities, serving as physical embodiments of cultural identity and

historical continuity. The literature highlights the educational value of heritage conservation, emphasizing its role in teaching future generations about the cultural and historical narratives that have shaped the present (Smith, 2006). Moreover, the economic benefits of conserving heritage site are well-documented, with research showing that these sites often attract tourism, providing significant financial support to local economies while promoting cultural exchange (Ashworth, 2011).

The maintenance of historic buildings is basically related to three main aspects, i.e.: (a) history of city development, (b) old city area or environment with historical value, and (c) characteristics of "city architecture" and various architectural styles inherent in historic buildings (Rubiantoro, 2018).

There are a few basic considerations for preserving a building. First, the aesthetic significance, where the building's design represents a specific historical period (Catanese, 1986; Pontoh, 1992; Attoe, 1992; Tiesdell 1992). Next, notability refers to the building's unique architectural style and originality. The uniqueness highlights the building's rarity and its representation of a distinctive architectural style. Distinctive features give the building symbolic value, reflecting its importance in its area and mirroring the unique social and cultural patterns of its environment. Historical value pertains to the building's role in the city's historical narrative, contributing to cultural identity and traditions. Area improvement is related to how the building enhances the quality and value of its historic location, serving as a landmark that reinforces the city's character. Functional adaptability denotes the building's ability to offer various types of spaces and functions, making it versatile for different uses. Resource value considers the building as a reusable asset rather than one to be replaced. Lastly, economic and commercial value suggests that historic buildings should provide greater economic benefits and lower operational costs compared to other alternatives.

According to Feilden (2003 in Buton et al., 2022), the practice of building conservation must adhere to the aforementioned ethical principles. Firstly, it is of the utmost importance to document the initial condition of the building before any intervention, as this is the only way to gain an understanding of the history and development of the building. Moreover, any form of destruction, falsification, or removal of historical evidence

that could impair the cultural and historical value of the building should be eschewed. It is of the utmost importance that any intervention in conservation is undertaken with the utmost care and precision, to avoid any excessive alteration to the original character of the building. Furthermore, it is of equal importance to ensure that the beauty, history and integrity of the cultural objects in question are maintained throughout the intervention process. It is also essential that complete documentation of the methods and materials used during treatment is provided, to ensure that the chosen approach can be learned and reapplied in the future.

Adaptive Reuse

Adaptive reuse is the process of renovating or reusing existing structures, but adapting them to new uses; it is also the process of transforming obsolete and ineffective buildings into new ones that can be reused for different purposes (Shao et al., 2018). The establishment of adaptive reuse as an alternative solution began in the 1970s when architectural and conservation practices showed an interest in adapting and reusing historic buildings for purposes different from the original intent of the building (Plevoets & Sowińska-Heim, 2018 in Pasha et al., 2021). Several reasons contributed to this development: (1) the increased density of building components limited the possibility of new construction; (2) the widening scope of conservation made strict restoration practice impossible; (3) sustainable development; and (4) the utilization of cultural heritage as an economic resource for the community.

According to Irwansyah et al., (2019) adaptation represents a method which humans respond to changes occurring between themselves and their surrounding environment. Foster's (2020) research stressed the environmental benefits of adaptive reuse of buildings, including significant reductions in energy consumption and carbon dioxide and other greenhouse gas emissions, fossil fuel consumption, freshwater consumption, and material use. Several analyses agree that the adaptive reuse of existing buildings is beneficial to the environment. Adaptive reuse of buildings is a key strategy for sustainable development. It provides an economically and socially beneficial way to provide new, previously unused buildings for life leases. This minimizes the need, which is almost unusual (Ningsih et al., 2022). The establishment of adaptive reuse as an alternative solution began

in the 1970s when architectural and conservation practices showed interest in the adaptation and reuse of historic buildings for purposes different from those for which they were originally built (Plevoets & Sowinska-Eim, 2018) as cited in (Pasha et al., 2021). There are several reasons for this, i.e.: (1) increasing density of building components limits the possibility of new construction; (2) expanding the scope of conservation makes strict restoration practices impossible; (3) sustainable development; (4) utilization of cultural heritage as a source of community economy.

Robert (1989) in Plevoets & Van Cleempoel (2011) presents 7 conversion concepts, including (1) building within it; (2) building on top of it; (3) building around it; (4) building along the side; (5) adapting to new functions; (6) building while maintaining style; and (7) recycling remaining materials. Other findings by Jager (2010, plevoets & Van Cleempoel, 2011) also exhibit a strategy similar to brooker and stone, i.e.: (1) addition; (2) transformation; and (3) replacement. Moreover, (Susanti et al., 2020) mentions that adaptive reuse is considered an important strategy in protecting and preserving cultural heritage. To apply adaptive reuse on a historical building or conserve the building, three approaches can be used, namely: typology, engineering, and architectural strategy.

According to Sofiana et al., (2014), the principles for implementing adaptive reuse include several key considerations:

1. Significance of the Place/Building: This refers to the overall value of a place or building, including its historical, architectural, and existential significance.
2. Degree of Modification: This involves the extent of changes made to accommodate new functions, which should be aligned with the type of activities intended for the building.
3. Connection to the Past (Reversibility): This principle addresses how the building's inherent values can convey a sense of its history to users, allowing for interpretative experiences.

Based on the principles of implementing the adaptive reuse concept which seeks to maintain and preserve old buildings yet to remain reversible with the level of changes being made, a review variable is needed for the implementation of adaptive reuse. According to a study by Tohjiwa (2021), based on the adaptive reuse principles conducted on the objects representing

old buildings, there are three aspects concerning adaptive reuse: (1) building restoration; (2) adaptive reuse; and (3) element interior.

RESEARCH METHOD

Location and Time of Research

The present research was conducted on colonial-style houses that have been converted into cafés located around the Baiturrahman area, named: (1) Café T36 Coffee, located at Jalan Teuku H. Abdullah Ujung Rimba, Kampung Baru, Baiturrahman District, Banda Aceh City; and (2) SOBA Café, at Jalan Teuku Abu Lam U, Kampung Baru, Baiturrahman District, Banda Aceh City.

The selection of both research objects is based on the cultural heritage law No. 11 of 2010 concerning Cultural Heritage, mentioning that the object must: 1) Be 50 years old or more; (2) Represent a style period of at least 50 years; (3) Have special meaning for history, science, education, religion, and culture; (4) Hold cultural value for strengthening the nation's personality; (5) Consist of single or multiple elements; (6) Stand freely or blend with natural formations. culture is defined as something having aesthetic, historical, scientific, or social value for the next generation.

The two cafés used to be colonial residential buildings and have recently been converted into cafés. Based on the preliminary survey in Banda Aceh, it is known that two colonial residential buildings have been adapted into cafés. These two cafés are also popular in the city as a result of the conversion of colonial-style houses into commercial places in the form of cafés. Both houses represent the development of residential architecture in Banda Aceh during the colonial period in the 1930s.

Figure 1. Map of Research Location

Source: Author

RESULTS AND DISCUSSION

Café T36 Coffee

Before becoming a café, the house experienced several changes in function. After being used by Mr. Ramli and his family, it was transformed into Malahayati Hospital between the 1970s and 1979. It was later repurposed as a residence for Mrs. Cut Erna Mutia and her family until 2004, when it was affected by the tsunami. Following the disaster, the house was left uninhabitable and then leased out as an office. In 2010, it was rented and converted into Black Jack Café.

The house is a single-story structure with the main portion being a wooden stilt house, while the renovated rear section features reinforced concrete. It has been transformed into a café through adaptive reuse, preserving the colonial-era facade and original architectural forms.

(a) (b)

Figure 2. Café T36 Coffee (a) Before Adaptive Reuse (b) After Adaptive Reuse

Source: Author

Table 1. Building Changes of Café T36 Coffee

Category	Analysis	Changes
Period I 1970s		
Roof	Combination of central gable and pyramid on the right and left of the building, on the porch/terrace combined with a sloping roof	 
Building Body	Painted white	
Openings	Symmetrical window-door openings. double-leaf doors, large window openings with louvers, and vents located 50 cm from the ceiling.	
Building Legs	House on stilts 70cm above ground level	
Ornament	There is a balustrade	
Interior Space	Changes to the addition of bathroom service space (red)	
Period II 2010s		
Roof	No change	
Building Body	No change in shape, change in repainting with orange color	
Openings	No changes, repainting the frame	
Building Legs	There was a change in ground level due to flooding, hence the backfilling.	
Ornament	Balustrade replaced with vertical arrangement and painted brown	

Interior Space	Spaces were added and subtracted. The added area is a service area that integrates with the house from concrete construction (red). And the loss of part of the hallway	
Period II 2017 - present		
Roof	There is no change in shape, only the replacement of zinc material with a new one	
Building Body	No change in shape, just repainting. The building was painted white again	
Openings	No changes only repainting	
Building Legs	No changes	
Ornament	No changes, addition of ornaments such as tag name café and painting balustrade with white color.	
Interior Space	The inner space has not changed its shape, only the arrangement and adjustment in the conversion of the building into a café. Changes occur from the function of space. And the reduction of building walls	

Source: Author

SOBA Café

This is also a Dutch colonial-style building that was eventually converted into a café. SOBA Café is across from Café T36 Coffe, and they are separated by the Taman Sari city park. Before becoming a café, the building was used as a tutoring place for students in 2010, then left empty until it was renovated into a café in early 2023.

(a) (b)

Figure 3. SOBA Café (a) Before Adaptive Reuse (b) After Adaptive Reuse
Source: Author

The building is a single-story structure made of concrete with a zinc roof, while wood is used for ventilation and window or door frames. It maintains a colonial aesthetic, evident in its large windows, double shutters, ventilation shapes, and pyramid roofs. Analysis shows that both cafés exhibit similar approaches to adaptive reuse, converting colonial houses into cafés through various renovations. Key renovations include changes to the building's artistic features, spatial patterns, furniture layout, circulation, lighting, and maintenance. These updates address damaged components, adapt the building for new functions, and enhance comfort and appeal to attract customers.

Table 2. SOBA Cafe Building Changes

Category	Analysis	Changes
Period I 2010s		
Roof	The roof is shield-shaped, with a gevel decorated with horizontal ventilation grilles. The roof on the terrace uses a flat roof	
Building Body	Painted cream, with a horizontal accent trim added around the building in green and orange.	
Openings	symmetrical large openings, the use of double doors and large windows with iron shutters	
Building Legs	Presence of natural stone painted red	
Ornament	There are no ornaments	
Interior Space	The room is asymmetrical but still forms a grid. There is a corridor next to the building	

Period II 2023s		
Roof	There is no change in shape, only a replacement of the old roofing material with a new one	 
Building Body	The building has not undergone any changes in shape. The only modification is a repainting with white color.	
Openings	The openings in the building have also not changed. The trim around the doors and windows has been removed	
Building Legs	There are no changes. The base of the building, which is adorned with natural stone, has been repainted black.	
Ornament	Addition of decorative elements such as shading on the window openings and the planting of vegetation.	
Interior Space	The interior layout remains unchanged, but some floors have been updated with red ceramic tiles, the courtyard has been reorganized, and a new blue room has been added for the café. Additionally, some spaces have had their functions modified.	

Source: Author

Adaptive Reuse Implementation Processes

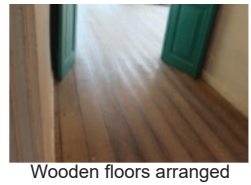
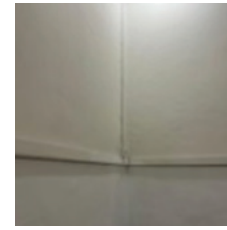
The adaptive reuse of residential houses into cafés involves analyzing spatial patterns, zoning, and functions, followed by studying spatial forms to design effective café spaces. For both Café T36 Coffee and SOBA Café, renovation processes were reviewed using recent data, archival drawings, owner interviews, and on-site measurements. This study aims to understand the changes made and track the evolution of adaptive reuse practices in these cafés.

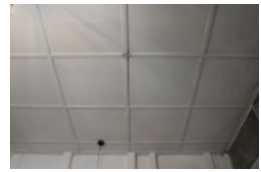
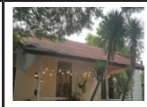
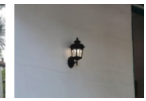
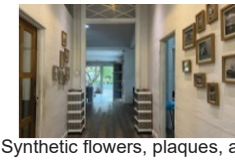
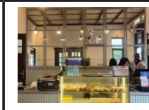
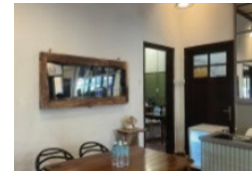
The findings indicate that exterior changes and renovations were minimal, involving mainly maintenance and repainting, as well as adjustments to the building's land surface, balustrade, and some decorative elements. In contrast, the interior saw substantial changes, including modifications to space functions and zoning, alterations to room walls,

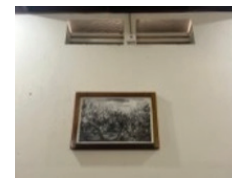
floor renovations, and updates to windows, doors, and toilet planning. These interior renovations were carried out to accommodate new functions. Elements that can be maintained include high ceilings as they must adjust to the surrounding climate and temperature. According to Meutia & Sari (2021), lowlands in Aceh such as Banda Aceh with an average temperature of 27º require high ceilings to allow circulation in the building to produce cooler air.

Table 3. Adaptive Reuse Implementation Processes

Aspect	Variable	Observation Results	
		T36	SOBA
Building Restoration	Initial Condition	 The residential building originally featured Indische Empire and transitional colonial styles, with a mix of gabled and pyramid roofs and decorative balustrades. Its layout is symmetrical, and the service areas are distinct from the main house.	 The building has a modern colonial design with a shield-shaped roof and gevel ornaments. Its interior layout is asymmetrical, and while the service areas are integrated with the main house, a corridor at the rear provides some separation.
	Physical Change	 During adaptive reuse, the exterior saw minimal changes—mainly ground surface updates and repainting. The interior was modified with new service rooms added and the hallway removed.	 The facade of the building remained unchanged during adaptive reuse, with only repainting done. Interior changes were limited to raising the floors in several rooms.
Adaptive Reuse	Functional Change	-Bedrooms are now customer lounges/sitting areas. -The family room has been converted into a cashier and bar area. -Service rooms, like the kitchen, retain their original functions. -The warehouse is repurposed for storage and employee rooms.	-Bedrooms and living room become the customer sitting area. -Family room becomes the cashier area and food display bar. -Several rooms in the hallway functions as storage and employee rooms. -Service rooms such as the kitchen have not changed.

	Room Layout	The layout stayed the same after adaptive reuse, with functional changes using existing facilities.	The layout stayed the same after adaptive reuse since the functional changes used the existing facilities.
	Room Atmosphere	Most customers find the changes excellent, noting a comfortable, calming atmosphere with good air circulation and furniture arrangement.	The majority of customers perceive that the changes made are good. The atmosphere of the room feels comfortable and calming.
	Floor	 Wooden floors arranged vertically in the original building  Monochrome, gray, and cream ceramics were used in additional areas	  Use of gray tiles in the service area and red tiles in the main room, guiding block on circulation   Floor repair with 40x40 cm red ceramics in the front room.
	Wall	 The main building is wooden with white horizontal wall elements, while the addition is gray concrete with iron trellises.  	 The interior walls were cream-painted, puttied, and covered with HPL, with added mirrors and profiles for aesthetics.  
	Ceiling		

		-Terrace is equipped with a ceiling made of tepas material.  -Interior space has not changed, using a plywood ceiling that is painted white and patterned with a grid.	-The ceiling is cream-painted plywood with grid accents and brown-painted wooden beams.  -The semi-outdoor ceiling features a creative design with winnowing baskets and hanging ropes.
	Furniture	  Furniture is mainly wooden, including tables and chairs combined with foam, fabric, and monochrome iron plates.	  Furniture is mainly wooden, including tables and chairs combined with foam, fabric, and monochrome iron plates.
	Accessories	  The terrace and room are both illuminated by hanging incandescent lamps, with the room also featuring black stainless steel hoods. Artistic wall lamps are installed on the terrace sides. Other accessories include vintage photos in wooden frames and ceramic mosaic plates displayed in the hallway.  Synthetic flowers, plaques, and the like are utilized.	  In the room, minimalist incandescent lamps are hung. Artistic wall lamps are used outdoors, while the semi-outdoor area features incandescent lamps with handmade rattan shades. Other accessories include: Mirrors are framed with varnished wood.  Colonial-themed photos are displayed, but the interior decoration is seen as lacking.

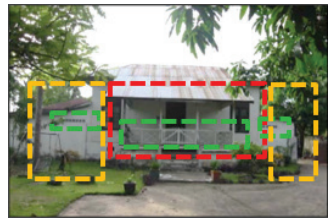
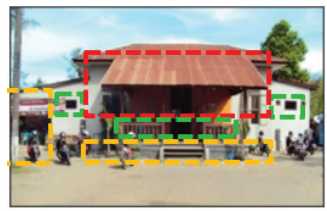
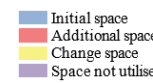
Source: Author

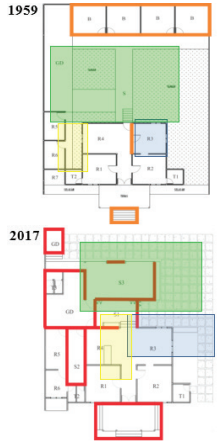
Changes in the Café T36 Coffee and SOBA Buildings Following Adaptive Reuse

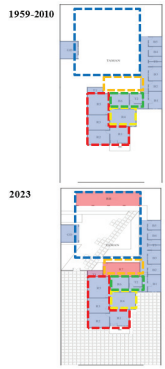
The changes in function will affect aspects such as buildings, rooms, and activities within them. During the change processes via adaptive reuse, there will certainly be additions and reductions to the physical building. Also, the interior will be adjusted to the new function. In the present case, adaptive reuse of the old buildings involves adjusting the new functions from houses to cafés.

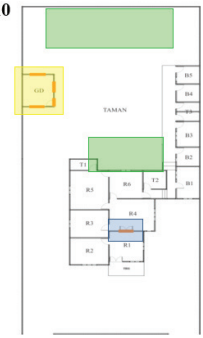
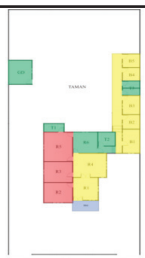
Table 4. Analysis of Café T36 Coffee in Adaptive Reuse Adaptation

Café T36 Coffee		
	Data	**Analysis**
Site		Café T36 Coffee is located in a former Dutch colonial building on the left side of Taman Sari, a historically significant area known for its Dutch colonial architecture.
Structure		Café T36 Coffee, with its original wooden structure, has been modified to include structural columns and a mix of wood and concrete construction. The added columns are positioned at the rear, while the original wooden framework remains the main support. Concrete Construction Wood Construction

Exterior	Period I (1959 – 1980)	
		The building is a white-painted wooden structure (red) with a gabled and pyramid roof, featuring green accents on the bathroom ventilation and balustrade. Originally a hospital in 1970, it was further modified in 1980 with concrete service areas (orange).
	Period II (2005 – 2010)	
		The building was converted into Black Jack Café in 2010, following its use as office space. The land was lowered (yellow), ventilation ornaments updated with glass and wood (green), and pillars and balustrades redesigned vertically. The main building was repainted orange (red), and the side area was converted into an outdoor café space.
	Period III (2017)	
		In 2017, the building was renovated for its adaptive reuse as a café. The entire structure was repainted white, and the ventilation (green) ornaments were updated with a minimalist design. The terrace floor was modified, the left side was converted into café space, and a green café billboard was added.
Interior	Changes in Room Function	
		-Rooms R1 and R2 were transformed into visitor areas. (red). -The study room (R3) was transformed into a visitor area (green). -The communal room (R4), formerly a family room, was repurposed as a bar and cashier area. (blue). -The small rooms (R5, R6, and R7), once bedrooms and storage, are now office space for the café. (yellow). The corridor and storage area (S and DG) were expanded to include a kitchen, a semi-outdoor seating area, and a prayer room (orange). 

	Wall Change	
		-The walls of the room (R3) were removed to expand the lobby and connect it to room (R4), now a bar and cashier station. -Additional walls were added to the side corridor (S2) (yellow) to create storage space, a corridor, and a backyard garden. Extra walls (GD and S) were added for service areas. -New walls were built for the kitchen, and part of a wall was removed to enhance airflow in the semi-outdoor seating area. (green).
	Changes in Zoning	
		-The private zones, which included the bedrooms (R1, R2, R3), were converted into semi-public areas. -Some semi-public zones (R5, R6, R7) were transformed into private spaces, such as office areas or staff rooms. -The service areas, including the warehouse, kitchen, and restroom, were partially retained but modified to include semi-public areas.
SOBA Café		
Aspect	Aspect	Aspect
Site		SOBA Café is located in a former Dutch colonial house on the right side of Taman Sari, also known as Taman Bustanussalatin, a historically significant area from the Dutch colonial era.

Structure		SOBA Café features a robust reinforced concrete framework. The floor plan shows that all existing structural columns and walls have been preserved and remain unaltered. Concrete Construction Wood Construction
	Period I Before Renovation (2010)	
Exterior		The concrete building is ivory white with orange and green trims (red). It has a shield-shaped roof with a flat terrace and eaves, adorned with green gavel decorations. The building features glass windows and doors with accent trims, and the base, decorated with half-stone, is painted red.
	Period II (2023)	
		Changes include repainting the building white, the door and window frames dark brown, and the stone base black, with added yellow vegetation. Colonial features like the waterfall-style canopy and green gavel ornaments were retained.
	Changes in Room Function	
		The SOBA Café building has not undergone any changes -Room functions were updated by converting the living room (R1) and bedrooms (R2, R3, R5) into seating areas (red). -The family room (R4) was converted into a bar area with snack displays and a cashier desk (yellow). -Room (R6) is used as a kitchen, retaining its original function. -A new space was added as an outdoor bar area (orange), and the landscaping of the backyard was arranged (blue).

	Wall Change	
	1959-2010 	-The wall between the living room (R1) and the family room (R4) (blue) was reduced to replace a single door with a double door. -The walls in the storage room (GD) (yellow) were reduced on each side to open the space, turning it into a semi-outdoor area.
	2023 	Additional walls were added to create a semi-outdoor space for seating and an outdoor bar area (green).
	Changes in Zoning	
	1959-2010  **2023** 	-Private areas, including bedrooms (R2, R3, and R5), were converted into semi-public seating areas for visitors. -Semi-public spaces like the living room and family room (R1 and R4) continue to serve as visitor seating and a cashier/ snack bar area. -The service zone remains unchanged, with additional service areas added at the rear. -The booth areas (B1, B2, B3, B4, and B5), previously a kitchen, storage, or semi-public rooms, are now private spaces. Zona Public Zona Private Zona Semi Public Zona Service

Site

Both Café T36 Coffee and SOBA Café are situated in former Dutch colonial houses, with Café T36 Coffee on the left side of Taman Sari (Taman Bustanussalatin) and SOBA Café on the right. These cafés frame the historical park, which was once surrounded by colonial-style buildings, enhancing the area's historical ambiance.

Structure

Café T36 Coffee, originally built with wood, has added column structures and combined wood with concrete, but retains its main wooden framework. In contrast, SOBA Café features solid reinforced concrete construction, with all original columns and walls well-preserved.

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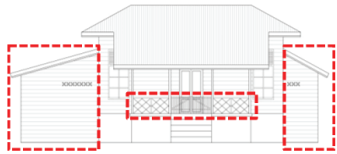
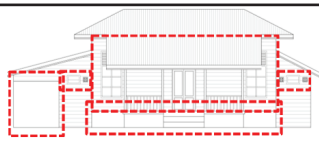
Table 5. Transformation of the T36 Coffee Café Building Exterior Changes

Colonial House Construction	Transformation
 Building when first purchased in 1959	The main building, a white-painted wooden stilt house raised about 1 meter, featured diagonal intersecting lines as ornaments on the bathroom ventilation and terrace bollards.
 Building has undergone adaptive reuse and reoccupied from 1970 until pre-tsunami	Adaptive reuse started in 1970 when the house was converted into a hospital. In 1980, it was repurposed as a residence with updates, including a concrete service room, before the tsunami disaster.
 Building after the tsunami, converted into an office and Black Jack café in 2005–2010	After the tsunami, the house became an office and Black Jack café in 2010. Changes included raising the ground level, renovating bathroom ventilation with glass and wood, painting the building orange, and updating pillars and bollards to a minimalist design.

 T36 Coffee Café building from 2017 to present	In 2017, as a café, the building was renovated to evoke its colonial past. It was repainted white, the wooden terrace floor was preserved, and bathroom ventilation was updated to a minimalist style. The terrace floor surface was also modified, with paving added to the sides.

Source: Author

Table 6. Transformation of the SOBA Café Building Exterior Changes

Colonial House Construction	Transformation
 SOBA Café building prior to renovation, last changes in 2010	Changes to the building were only made to repainting the exterior. Half of the building's feet decorated with stones were painted red.
 SOBA Café building post-renovation, 2023	Overall, the building was repainted bright white, with door and window frames in dark brown and stone bases in black. A curved waterfall-type canopy was added, featuring straight side covers, typical of European-style hotels and restaurants.

Source: Author

Room Function

Figure 5. Plan of Changes of Room Function for Café T36 Coffee (Before and After Adaptive Reuse)

Source: Author

After analysis, Café T36 Coffee's room functions were updated: bedrooms (R1 and R2) are now private seating areas, bedroom (R3) is also a seating area, and the former family room (R4) is now a bar and cashier area. Small rooms and storage (R5, R6, R7) have been converted into a café office, employee break area, and storage.

At Soba Café, former bedrooms (R2, R3, R5) are now customer seating areas. The living room (R1) was converted into a private room for large groups. The family room (R4) is now a snack bar and cashier area. The kitchen (R6) remains unchanged, while the bathroom in the bedroom (T1) is out of order due to plumbing issues. Separate cubicles connected by a corridor are now used as employee areas.

Figure 6. Plan of Changes of Room Function for SOBA Café (Before and After Adaptive Reuse)

Source: Author

CONCLUSION

The implementation of adaptive reuse for conservation in buildings is motivated by two objectives, i.e.: maintaining or restoring the physical buildings and changing them to serve other functions. In the implementation, the adaptive reuse processes for the conversion of colonial houses into cafés have uniformity, indicated by significant changes in the buildings' interior and minor changes in their envelope. Old elements are presented through

furniture styles, materials, floor patterns, wall ornaments, and ceilings. Meanwhile, contemporary elements are displayed through new functions and contemporary services. Several parts of the main building including the structure and facade are maintained, while the installation and room arrangements must be adjusted to the new function.

It can be concluded that Café T36 Coffee and SOBA Café have succeeded in implementing the concept of adaptive reuse in colonial architectural style residential buildings. New functions can be incorporated into the buildings while maintaining the old appearance on the facade. The impression of old buildings can be strengthened by an interior design that carries a vintage concept in various elements (floors, walls, ceilings, furniture, and other interior elements).

ACKNOWLEDGMENT

We extend our sincere gratitude to all the participants who took part in this study, providing their time and valuable insights, which significantly contributed to the depth and quality of the data collected for analysis. We also deeply appreciate the support provided by Ms. Erna Mutia and Mr. Edward, the owners of Café T36 Coffee and SOBA Café, for facilitating access to essential data sources needed for this research.

FUNDING

There is no funding for this research.

AUTHOR CONTRIBUTIONS

All authors contributed to the planning and research process including data observation, data analysis, and writing. All authors have also read and approved the final manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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