

The Transformation of Heritage Buildings as Tourist Attraction :

Adaptive Re-use of Colonial Buildings at a Bandung Conservation Area

Nurtati Soewarno
Architecture Department
Institut Teknologi Nasional
 Bandung, Indonesia
 nurtati@itenas.ac.id

Dian Duhita
Architecture Department
Institut Teknologi Nasional
 Bandung, Indonesia
 dian.duhita@itenas.ac.id

Abstract— The strategic geographic position with extensive land and sea areas makes Indonesia rich in cultural heritages. Other than that, Dutch Colonial Government which ruled for a relatively long time in Indonesia also left some cultural heritages. Those cultural heritages are believed to have a potential to attract tourists, and one of the cultural heritages is the buildings. By using grounded research and taking some cases this paper will describe the potential of the buildings in one cultural heritage area in Bandung city that attracts many tourists. The buildings discussed are the residential buildings built during the Dutch colonial government era. After the independence, those buildings were acquisitioned by the Indonesian government and its army to be used as dwelling houses. The diversity of activities offered in this area is one of the supporting factors that attract the tourists, presented with artistic style as a reflection of the cultural diversity in the form of hotels, restaurants and factory outlets. The results of the research showed that uniqueness of architecture style and location potential have created specific recreation experiences as the attractiveness that change the area into one of the tourist destinations in Bandung city. Adaptive re-use concept which is implemented to the buildings is believed optimizing the built-in area more effectively than building new buildings. The research questions addressed in this study are: Does the adaptive re-use concept have impact to the buildings and surroundings?; What kind of building transformation is the right one as an effort to adapt to the new function? Adaptive re-use is expected to be one of the conservation efforts to revive buildings and the conserved area by maintaining the existing built environment in the city.

Keywords—*building transformation, adaptive re-use, conservation area*

I. INTRODUCTION

Indonesia has a variety of cultural heritages, either tangible or intangible. One of the tangible cultural heritages

is the buildings also known as cultural heritage buildings. At present time there are 6 conservation districts which have already established by Bandung Regional Government, one of them is the Military District.

This district was originally a fortress located at the East side of Bandung and after the independence it was occupied by the West Java Army called Siliwangi. The Military District covered the area between two prominent landmarks, Taman Lalu Lintas and Gedung Sate functioning as an office, housing, shelter, and storage.

Eventually many changes took place at this Military District, one of them was building function alteration. Most of the changes occurred along the LLRE Martadinata Street (previously known as Riau Street)

This street was originally a residential district dominated by military officers and residents. At present time it is hard to find the residential buildings, they have experienced some changes particularly in terms of functions. The original functions have been changed into some new functions which are mostly commercial function. According to the data from our field study and some cases, it is believed that the potential of the location and the architecture building styles are the driving forces of the changes.

In general, the cases began with the function alteration which were then followed by the physical changes as an effort to adjust to the new functions, commercial. The combination between the commercial needs and conservation effort has created a unique design that makes this area one of the tourist destinations in Bandung. This area provides all what the tourists need, such as fashion shops, cafés, restaurants, banks, motels and hotels so this area has become one stop shopping area.

With the adaptive re-use concept, it is expected that the existence and authenticity of cultural heritage building could be maintained and the addition of the new structures or buildings could support commercial activities. It is also expected that the commercial activities and building preservation could run harmoniously, not only in this area but

also in the other conservation areas in Bandung. The Government's intervention is considered crucial to monitor the changes in cultural heritage buildings so that the preservation building effort could run well.

II. TRANSFORMATION AT CONSERVATION AREA

A. Conservation Area

As shown on Figure 2, there are 6 conservation areas in Bandung which were established by the Government (Bandung Regional Government No.19 year 2009) namely: Central City District, Chinese District, Military District, Sundanese Ethnic District, Villa District and Industrial District.

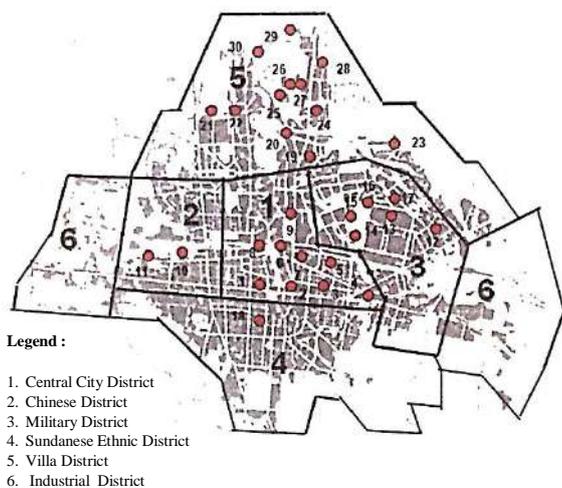


Fig. 1 Conservation Area in Bandung
Source: Architectural Conservation Award Bandung, 2014

B. Revitalization

The regulation of the city of Bandung (Bandung Regional Government) No.19 year 2009 explains that the planning of historical districts can be done by several methods, some of them though these following concepts:

- Preservation or conservation is all efforts to lengthen the age of a cultural heritage/or building through protection and maintenance;
- Maintenance is all efforts to protect cultural heritage areas and /or buildings from damages caused by either human or natural and biological factors though maintenance and preservation.
- Utilization is all efforts to empower cultural heritage areas and/or buildings as cultural assets for various interests that are not contradictory with their preservation;
- Integration is an effort to determine the boundaries of an area or cultural heritage building according to its designation, to become the core, buffer or development zone.
- Restoration is a series of efforts that aim to restore or maintain the authenticity of cultural heritage areas and / or buildings through rehabilitation, restoration, reconstruction, adaptation and preservation, which could

be accounted for in archeological, historical and technical terms;

- Revitalization is an effort to empower the situation and condition of cultural heritage areas and buildings for various functions that support their preservation;
- Restoration or rehabilitation is the preservation of an area and / or building of cultural heritage by returning its shape to its original state by removing additions and installing the original components without using new materials;
- Reconstruction is an effort to return a place as closely as possible to its original state, using old and new materials, according to known historical information;
- Adaptation is changing cultural heritage areas and / or buildings so that it can be used for more appropriate functions without requiring drastic changes;
- Recovery is an effort to restore the physical form of a building to its original condition, so that the building can be reused, either by continuing the original function or the new function.

C. Building Transformation

According to Ching (1979), transformation requires first that the ordering system of the prior or prototypical model be perceived and understood so that, through a series of finite changes and permutations, the original design concept can be clarified, strengthened and built upon, rather than destroyed [3].

Transformation itself is defined as a slowly changing process until it reaches its peak. The changes occur as responses to external and internal forces that lead the changing process from known shapes before, through repeatedly reduplicating or doubling the object (Antoniades, 1990) [1].

Transformation cases in this paper were encouraged by building function alteration in cultural heritage buildings. It The initial form of a building should be identified although some elements or structures are added. Old pattern is still used but it appears in a new form; lay out, material and style adapting to the new function and contemporary trends.

D. Urban Tourism

The tourism components in an area according to McIntyre (1993) in the Sustainable Tourism for Local Planner [3] consist of:

- tourist attractions and activities, i.e. things that can be seen and done by tourists in a tourist area. These various attractions include panoramic views of amazing natural beauty (landscapes) and cultural results of human creation (landmarks);
- accommodation facilities and services, i.e. 'temporary homes' for tourists such as hotels, motels, bungalows, dorms, inns, *griyawisatas* and homestays;
- other facilities and services including restaurants, souvenir shops, money changers, information service centers, health and safety service;
- transportation facilities and services;
- infrastructure including water, electricity, telecommunications (telephone), sewerage;
- institutions or organizations that can grow tourism through promotions, making tourism regulations,

arranging tourism organizational structures, opening domestic investment doors, offering education and training for people involved in tourism, conducting caring or loving the environment programs, and providing better facilities and infrastructure.

III. RIAU STREET IN MILITARY DISTRICT

A. Location

Riau Street is located in the East of Bandung city and is included in the Military District conservation area. This street stretches for approximately 3 km long from the North to East of Bandung city.

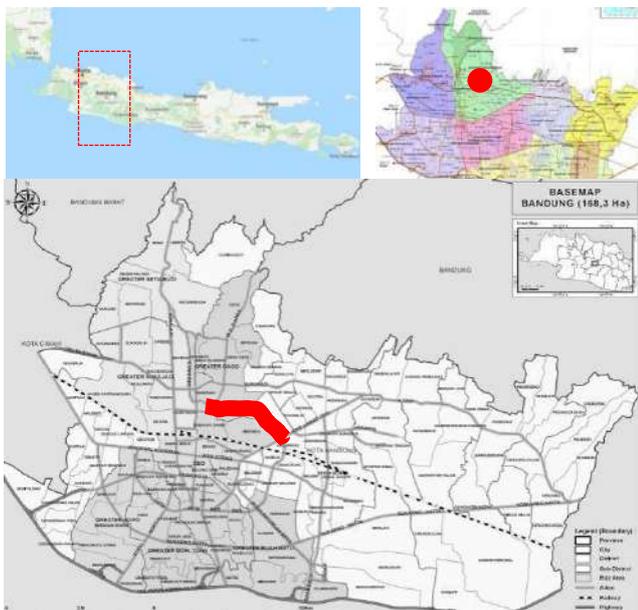


Fig. 2 Riau Street Location
Source: Google, 2018, edited

B. Conservation Area

Kunto (1984) claimed that Riau Street is one of the oldest luxury residential areas in Bandung [4]. Therefore, the area of this street has been designated as a conservation area in accordance with the City Spatial Detail Plan (RDTRK) No.2 of 1996 where historic buildings and environments in this region must be under protection and preservation.

This area was originally a complete residential environment as it had various facilities such as schools (currently Taruna Bhakti school from Kindergarten to Senior High School), Soeti hotel (currently Hotel Santika), and maternity hospital (Zuster Liem dan Zuster Tedja), Sariningsih hospital, and some parks. After the independence most buildings in Riau Street were occupied by the Indonesian Military and used as offices, dorms, a dental clinic and residences for the Army officers.

The changes of people’s way of life and life style also change the city. It could be observed by the establishment of new shopping centers. In Bandung new shopping centers are mostly established in the former Colonial areas which are

located in the North part of Bandung, one of them is on Riau Street.

In the present time we still can find some Colonial buildings on Riau Street. These buildings have attracted investors to make use of them commercially. One after another these military owned buildings was leased and its function was altered into factory outlets. This function alternation was strongly influenced by the success of Heritage Factory Outlet as the pioneer of the factory outlets on Riau Street.

C. Riau Street as a Case Study

Considering the length of the street as well as to make data collection and investigation on Riau Street easier, we divided the street into 5 segments. Every segment is bounded by an intersection (see Figure 3).

Segment 1: corridor Wastukencana Street - Ir.H.Juanda Street. Compared to other segments, there are relatively a few buildings here with no residential function left at present. All buildings have experienced a function alternation as offices, hotels, and showrooms. This segment intersects Purnawarman Street stretching from the North to South which makes this corridor only have a small number of buildings.

Similarly, Segment 2 located between the intersection of Ir.H.Juanda Street and Trunojoyo Street maintains its original characteristic only on an Army officer’s residential house and Sariningsih hospital. On the contrary, Hotel Soeti as the first hotel on this street has transformed into a vertical modern hotel, while other buildings have become a mall and hotels.

Segment 3: corridor Trunojoyo Street – Banda Street. This corridor is still dominated by one story buildings, the military buildings, functioning as offices, soldiers’ dormitories, and a dental clinic. Other buildings have different kinds of functions such as restaurants, schools, hospitals, and factory outlets.

Segment 4: corridor Banda Street – Taman Pramuka. This segment is the longest and still maintains the residential function. The building transformation is more complex since there are some changes and additions to the original building structures.

Segment 5: corridor Taman Pramuka – Jend. Ahmad Yani Street. This segment is the first district developed along with the expansion of Bandung city to the Eastern part. Similar to Segment 3, this segment is still dominated by one story buildings expect those at the corner of the corridor bordering Jend. A. Yani Street.

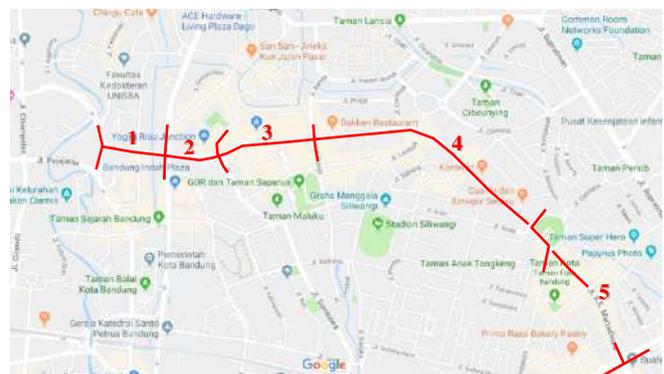


Fig. 3 Segment Division at Riau Street
Source : Google, 2018, edited

D. Pedestrian Sidewalks

Designed for a luxurious residential area, Riau Street is equipped with pedestrian sidewalks and greeneries at both sides. The building function alteration occurred on this street has affected the pedestrian sidewalks significantly, and the alteration of land use also has influenced the surrounding area.

It is commonly known that street vendors are inevitable in big city streets, especially at places where many people come. It also happens on Riau Street where a big number of street vendors occupy half of the pedestrian sidewalks, and some time even leave no space for its original function (walking). The limited space and increasing of motorcycle parking lot demands have also turned the pedestrian sidewalks into a parking space. So the sidewalks are used not only for walking but also for commercial activities, the street vendors.



Fig. 4 : Previous condition of pedestrian

To restore the pedestrian function, in 2016 the Local Government revitalized the pedestrian sidewalks. The physical improvement were performed by widening the lane and culverts. Some street furniture such as benches, trash cans, bollards, street lights, signage, bicycle racks and greeneries have also been added to make the pedestrian sidewalks beautiful and comfortable.



Fig. 5 : The present condition of the pedestrian sidewalks

E. Building Styles

There are various architectural styles of the buildings on Riau Street including Modern Tropical Dutch Indies Style, Renaissance Style and Art Nouveau Style [5] (see Table 1).

TABLE I. BUILDING STYLE AT RIAU STREET

No	Building Style		
	Picture	Segment	Style
1		3	

2		4	Modern tropical Dutch Indies
3		3	
4		4	Renaissance
5		5	Art nouveau

IV. THE TRANSFORMATION

The building transformation has occurred in every segment. To investigate the building and district function alternation, a field study was conducted. However, considering the length of the segments and the number of the buildings, the observation was only conducted on 3 segments (Segment 3, 4, and 5).

A. Building Functions

As shown on Figure 6, Segment 3 is dominated by shops, cafés and restaurants. There are 5 residential buildings left or approximately 14% only. The street view of Segment 3 is displayed on Figure 7.

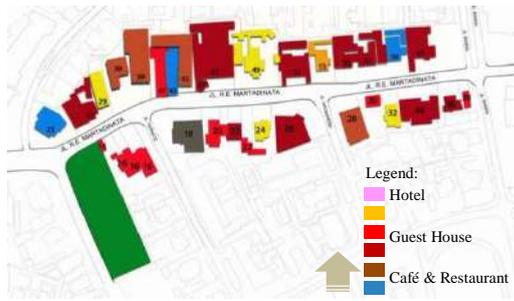


Fig. 6 Building Function of Segment 3



Fig. 7 Street Picture of Segment 3

Figure 8 illustrates the building functions on Segment 4. The building functions on this segment are hotels, cafes and restaurants, shops, hospitals, and offices. There are only 24 residential buildings or 39% left. Figure 9 displays the street view of Segment 4.



Fig. 8 Building Function of Segment 4



Fig. 9 Street Picture of Segment 4

As illustrated by Figure 10, the building functions on Segment 5 are varied including all of the functions, and the residential buildings left were 13 buildings or 36%. The

function alternation is dominated by restaurants and hotels. To see the street view of Segment 5, see Figure 11.



Fig. 10 Building Function of Segment 5



Fig 10. Building Function of Segment 5



Fig. 11. Street Picture of Segment 5

The table below shows the comparison between the residential and non-residential functions on Segment 3, 4, and 5.

TABLE II. BUILDING FUNCTIONS

No	Building Function		
	Segment	Residence	Non Residence
1.	3	5	31
2.	4	24	62
3.	5	13	23
Total		42	126
Percentage		33%	67%

B. Pedestrian Sidewalks

The revitalization of the pedestrian sidewalks performed in 2016 was quite significant. The width of the sidewalk was previously ± 1.50 meter, it is now ± 5.00 meter. This widening was done by covering the drainage channels to become a part of the sidewalks and greeneries. Figure 12 displays the difference conditions of the sidewalk before and after the revitalization.

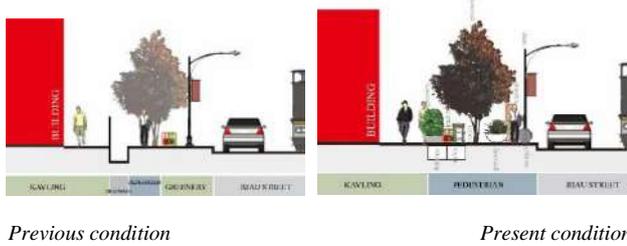


Fig. 12 Pedestrian Section at Riau Street

In addition to the widening, the sidewalks are also equipped and beautified by adding some street furniture such as greeneries, bollard, bike track, bench, guiding block and trash bins. The sidewalk material was also replaced by granite, from previously paving block. Table III below summarizes the changes of the sidewalk before and after the revitalization.

TABLE III. STREET FURNITURE AT RIAU STREET

No	Street Furniture		
		<i>Previous</i>	<i>Present</i>
1	Sidewalk width	1.50 m	5.00 m
2	Greenery	√	√ 

No	Street Furniture		
		<i>Previous</i>	<i>Present</i>
3	Bollard	-	√ 
4	Bike rack	-	√ 
5	Street lamp	-	√ 
6	Pavement	√	√ 
7	Bench	-	√ 
8	Drainage	√	√
9	Guiding block	-	√ 
10	Trash bin	√	√ 
11	Signage	√	√ 

C. Physical Buildings

To discuss the physical appearance of the buildings on Riau Street, we have chosen three cases of building alterations. Figure 13 shows the location where the cases are located.



Fig. 13 Location of Case Studies

Case 1 : Heritage Factory Outlet, location A.
Riau Street no. 63 – Segment 3

The site coverage was originally 2983 m² and the building size was 380 m². It means there was 2603 m² unbuilt ground (open space). At present, there are additional buildings on the left and back side of the main building covering 967.5 m². On the right side of the building there is an additional non-permanent and transparent building used as a cafeteria, its size is 163 m². Additionally, there is also a parking space. At present time this area has changed into a connection area to next shop.

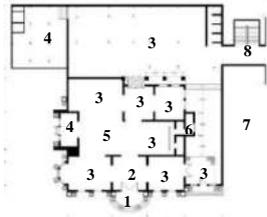
The main building itself originally had a floor plan of a typical Dutch house which consists of a foyer, a study room, a sitting room, a bed room, a pantry and a dining room, a storage and a toilet. Additionally, there used to be a veranda used for drinking tea or coffee in the morning or afternoon time.

In the present time most of the rooms are used optimally for a factory outlet such as display rooms, offices and storages. In fact, this factory outlet needs display rooms with different layouts in accordance with gender (men and women) and age (children and adults). Additionally, a display room for a more general purposes such as for household items (mattresses, pillows, bedsheets, towels, etc.) is also needed. As a result, the optimization is applied within the building. As a matter of fact, the optimization is also applied to the open space around the building. Not only used to add more display rooms, the front yard is also used for a parking space with a capacity up to 60 cars.

The additional rooms on the left, right, and back sides of the building did not change the physical appearance and façade of the building. This decision is in accordance with the regulation of the city government about conserved buildings type B.

Table IV summarizes the information and condition of Heritage Factory Outlet including the location, site plan, previous and present floor plan, original building and current building structures.

TABLE IV. HERITAGE FACTORY OUTLET CONDITION

Location	Siteplan
	
Previous Floor Plan	Present Floor Plan
 <p>LEGEND: 1. MAIN ENTRANCE 2. FOYER 3. STUDY ROOM 4. SITTING ROOM 5. DINING ROOM 6. LIVING ROOM 7. STORAGE 8. BEDROOM 9. KITCHEN 10. TERRACE 11. TOILET</p>	 <p>LEGEND: 1. MAIN ENTRANCE 2. FOYER 3. SHOWROOM 4. CAFETERIA 5. TERRACE 6. TOILET 7. ADDITIONAL ROOM 8. CONNECTING TO NEXT DOOR</p>
Previous Condition	Present Condition
	 
Additional building	

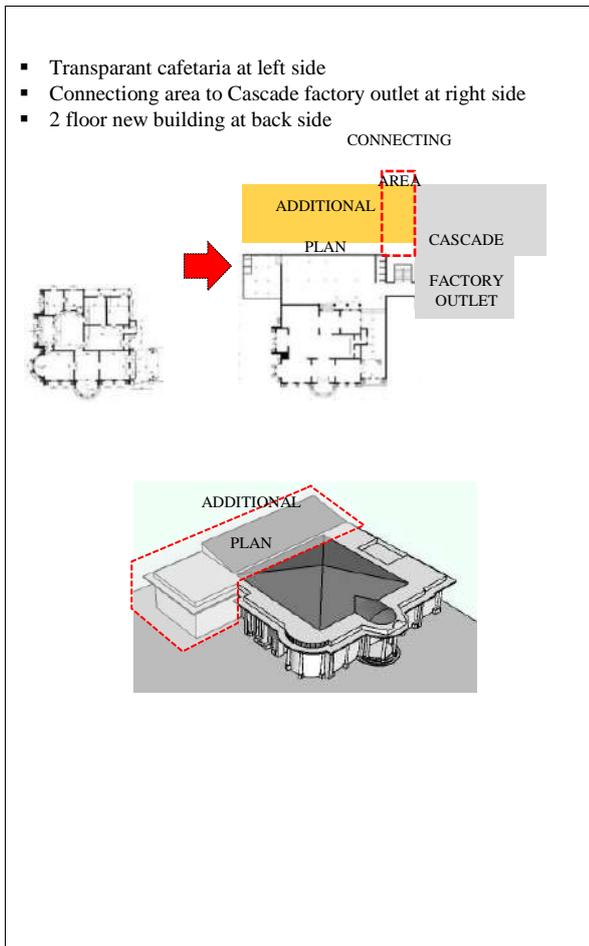


TABLE V. DAKKEN CAFE CONDITION

Location	Dakken Caf�'s site
Previous Floor Plan	Present Floor Plan
<p>LEGEND: 1. TERRACE 2. SITTING ROOM 3. STUDY ROOM 4. BEDROOM 5. DINING ROOM 6. VERANDA 7. KITCHEN, TOILET/SERVICE AREA</p>	<p>LEGEND: 1. TERRACE 2. CASHIER 3. DINING ROOM 4. VERANDA 5. TOILET 6. KITCHEN, STORAGE 7. GAZEBO 8. PRAYER ROOM</p>
Present condition of Dakken Cafe	
Additional building for service and open dining room	
<ul style="list-style-type: none"> ▪ service area the back side ▪ gazebo and open dining area (yellow colour) ▪ prayer room at left side 	<p>ADDITIONAL BUILDING</p>

▪ *Case 2 : Caf  Dakken*

Riau Street no. 67 – Segment 3

Caf  Dakken is a 230 m² building, built on a 1.219 m² land lot. This building has a tower on the corner of the front left. This tower used to be used as a veranda with the city of Bandung view (city square). This veranda was used for drinking tea/coffee. This building is one of the remaining building typology with a tower in Bandung city.

The function alternation becoming Caf  Dakken was performed by utilizing all of the rooms inside the building to become private dining rooms. There were no additional physical structures to the original building. However, there was an addition to the back yard. The new additional building has a service function (kitchen, storage, and locker room) and an open dining area. A prayer room is located on the left of the front side of the non-permanent and transparent structured building. The right and front yards are used as the parking lots. Table V summarizes the information about the caf .



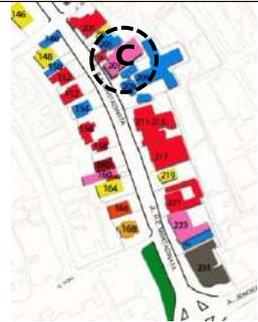
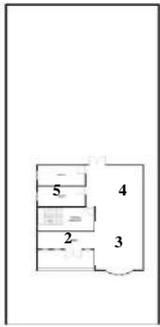
▪ **Case 3 : Tebu Hotel**

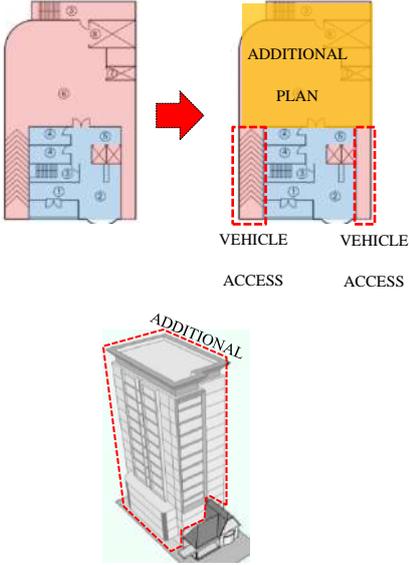
Riau Street no. 207 – Segment 5

Tebu Hotel was built on a 1.631 m² land. The original building is remained only at the front side with the size of approximately 306 m². This remaining structure is currently used as the lobby and reception of the hotel.

The rear part of the original building had been demolished and then built a new 7 floor building. The first three floors are used as parking areas, while the rest four floors are used for hotel rooms. There is a swimming pool on the rooftop as another facility offered by the hotel. The summary of information regarding Tabu Hotel is shown in Table VI below.

TABLE VI. TEBU HOTEL CONDITION

Location	Tebu's site
	
Previous Floor Plan	Present Floor Plan
	
1	<p>LEGEND:</p> <p>1. HALL</p> <p>2. LOBBY</p> <p>3. TOILET</p> <p>4. LOBBY LIFT</p> <p>5. PARKING LOT</p> <p>6. VEHICLE LIFT</p>

Previous Condition	Present Condition
	<p>LEGEND:</p> <p>1. TERRACE</p> <p>2. FOYER</p> <p>3. SITTING ROOM</p> <p>4. LIVING DINNING ROOM</p> <p>5. BEDROOM</p>  
Additional building	
<ul style="list-style-type: none"> ▪ Ramp at the left side used as vehicle access ▪ Parking area at 3 first floors the rest floor used as hotel room ▪ Swimming pool located at roof top 	
 <p style="text-align: center;">VEHICLE ACCESS VEHICLE ACCESS</p>	



D. Tourist Attraction

The Function alternation occurred on Riau Street has attracted many tourists. To facilitate their needs, a vast range of tourism supporting facilities were built such as hotels, cafés, coffee shops, restaurants, laundries and a tourist information office (fig 14).

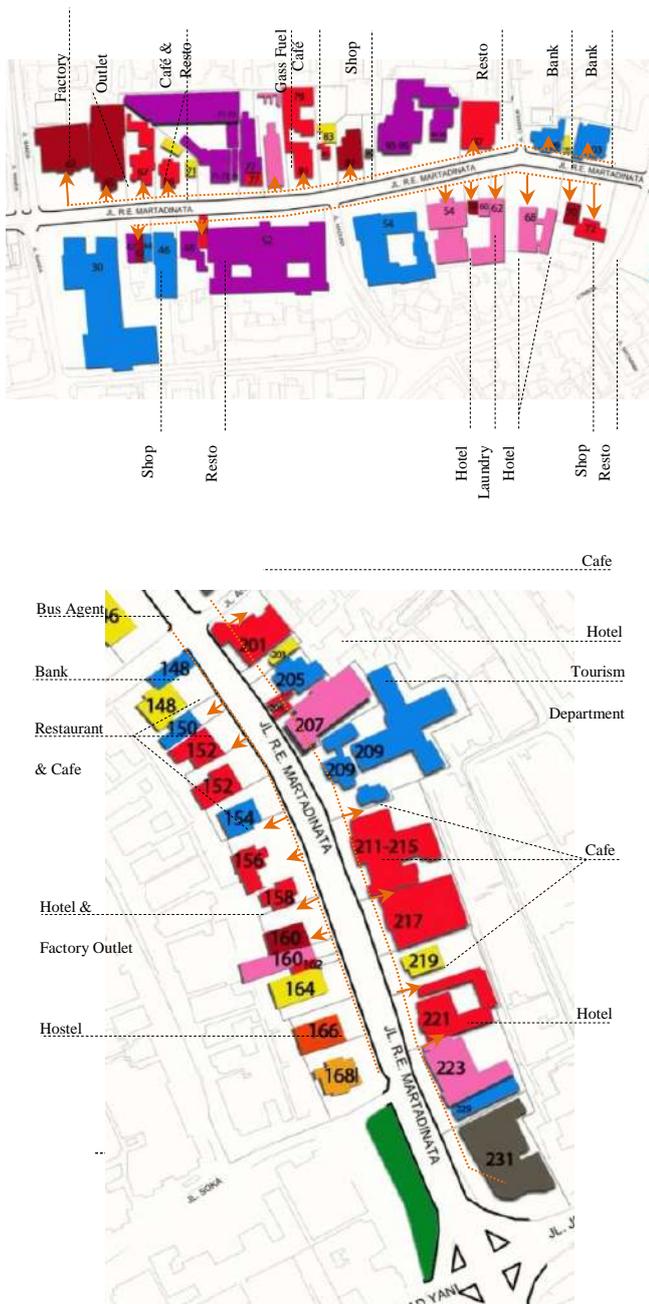


Fig. 14 Tourist’s facilities at Segment 3 and 5



Fig. 15 Some Tourism Facilities

V. CONCLUSION

The data from our filed study as well as the three cases, it can be concluded that the building function alternation (from residential to commercial function) on Riau Street has successfully preserved some buildings. The originality of the old buildings as heritage buildings can be maintained. In addition to that, the site can be enjoyed by the tourists.

Unfortunately, the increasing number of the tourists to this particular “commercial” site also has brought some unanticipated problems. The first problem is the lack of parking space. As the use of public transportation is not a part of the Indonesian people, the big number of the tourists also means the big number of private vehicles. As a consequence, more parking space is needed.

The lack of the parking space causes the function alternation of the open space (the parks) into parking lots. Another problem is the rain water absorption. The use of paving block apparently does not make the absorption more efficient. This is a big concern that the city water supply will be decreasing or even gone. Another sequence of this concerning problem is flood in the rainy season as the drainage capacity is limited.

The local government’s intervention to tackle these problems is expected so that Riau Street as one of the conservation areas in Bandung can become a safe and convenient shopping district. Conservation should be targeted not only to the buildings but also to the surrounding.

REFERENCES

- [1] Antoniandes, Anthony C, 1990. Poetics Of Architecture: Theory Of Design, New York, Van Nostrand Reinhold Inc.
- [2] Bandung Regional Government No.19 Year 2009
- [3] Ching, Francis D. K, 1979. Architecture, Form, Space and Order, Van Nostrand Reinhold Company, New York
- [4] McIntyre, George. (1993). Sustainable Tourism Development: Guide For Local Planners. Madrid: WTO.
- [5] Kunto, Haryoto, 1984: Bandoeng Tempo Doeloe, Granesia, Bandung
- [6] Hartono, Dibyo, Dr., (2014). Architecture Conservation Award Bandung, PT. Remaja Rosdakarya, Bandung.

Nurtati Soewarno, Taufan Hidjaz, Eka Viridianti, 2017. Addaptive Re Use As An Effort To Preserve A Historical District; A Case Study Of The Braga Corridor In The City Centre Of Bandung, Indonesia, Wit Transaction On Ecology And The Environment, Volume 223, 2017, Wit Press.