

Implementation of Responsive Architectural Concepts in The Design of The Cikole Forest Resort, Bandung, West Java

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ABSTRACT : Indonesia has a lot of potential for natural tourism in the form of mountains, sea, and beaches. This is also an attraction for tourists to make Indonesia as the preferred natural tourist destination when on vacation. Especially West Java, West Java is one of the provinces that are in great demand by local and outside tourists. Besides being famous for its local culture and its unique culinary variety, West Java is also known for its cool air, especially in some parts that are still preserved in nature, the natural potential that is still good and is maintained as an attraction for West Java to attract tourists. One of the famous areas in the city of Bandung which is a tourist destination is the Lembang Region.

From the last five years the lodging area in Lembang has increased, currently in Lembang sub-district itself has 13 lodging units in the form of resorts. The amount itself is influenced by the high demand for lodging accommodation especially when the holiday season arrives. But of that number, resorts that have complete and well-maintained facilities and conditions are still not completely even. Based on this fact, the purpose of designing this resort is expected to be the best tourist area in the region to be able to adjust to the conditions of the land conditions, be able to use and not damage the existing land on the design land.

The study used in this design is based on the description that occurs today with the support of the literature that supports the theory and analysis that is done. Implementation analysis was carried out using macro and micro analysis methods. Macro analysis is an analysis on a regional scale. While micro analysis is an analysis of the design site, which includes activity analysis, function analysis, space analysis, site analysis, shape analysis, and display and structural analysis and utility.

The concept of site and building in this design will produce a conceptual relationship that will later become a guideline in making a design. This concept includes the proposed concept of site design, form, structure and utility.

Keywords : Destination, Attraction, Culinary, Tourist, Unique

INTRODUCTION

1.1 Background

Indonesia has a lot of potential for natural tourism in the form of mountains, sea, and beaches. This is also an attraction for tourists to make Indonesia as the preferred natural tourist destination when on vacation. West Java (Permana, 2014) is one of the provinces that are in great demand by domestic and foreign tourists.

Besides being famous for its local culture and its unique culinary variety, West Java is also known for its cool air, especially in some parts that are still preserved in nature, the natural potential that is still maintained is an attraction for West Java to attract tourists (Permana and Wijaya, 2017). The number of tourist visits to accommodation in Java Barat by district/city is shown in table 1.

Table 1. Number of Tourist Visits to Accommodation in West Java by District/City, 2016

Kabupaten/Kota		Wisatawan Mancanegara	Wisatawan Nusantara	Jumlah
Kabupatency				
1.	Bogor	139.826	4.018.999	4.158.825
2.	Sukabumi	49.138	443.795	492.933
3.	Cianjur	9.350	11.140	20.490

4.	Bandung	77.200	3.965.258	4.042.458
5.	Garut	29.158	13.583	42.741
6.	Tasikmalaya	1.476	23.400	24.876
7.	Ciamis	3.505	70.071	73.576
8.	Kuningan	-	188.727	188.727
9.	Cirebon	1.588	130.796	132.384
10.	Majalengka	500	70.885	71.385
11.	Sumedang	7.455	144.249	151.704
12.	Indramayu	251	78.255	78.506
13.	Subang	45.507	1.104.324	1.149.831
14.	Purwakarta	7.913	209.873	217.786
15.	Karawang	61.237	73.971	135.208
16.	Bekasi	63.246	186.990	250.236
17.	Bandung Barat	278.027	481.114	759.141
18.	Pangandaran	10.344	912.184	922.528

Source: West Java Province Culture and Tourism Office, 2016

Based on table 1, it can be seen that Kabupaten Bandung Barat (KBB) is the region most visited by foreign tourists. Therefore Kabupaten Bandung Barat was chosen as the location of the design.

Kabupaten Bandung Barat (KBB) is one of the regencies in West Java Province, which is the result of the expansion of Bandung District (Badan Pusat Statistik Provinsi Jawa Barat, 2017). Geographical location based on data, namely the area of KBB, which is 1,305.77 KM², is located between 60° 73 'to 70° 31' South latitude and 107° 10 'to 107° 40' East. And it has an average height of 110 M and a maximum of 2,2429 M above sea level. The slope of the region varies between 0 - 8%, 8-15% to above 45%, West Bandung Regency is divided into 16 sub-districts namely Batujajar, Cikalongwetan, Cihampelas, Cililin, Cipatat, Cipendeuy, Cipongkor, Cisarua, Gununghalu, Lembang, Ngamprah (Mother KBB City), Padalarang, Parongpong, Rongga, Sindangkerta and Saguling. Regions that have many favorite tourist destinations for tourists are in the Lembang area. Because Lembang itself is strategically located, it is an area crossed by a connecting road between Bandung and Subang. Besides that the famous lembang area with its nature is still beautiful and still awake.

One of the areas of Lembang Subdistrict namely Cikole, Cikole is a village in the Lembang sub-district, the distance from Cikole to Lembang is around 5.1 km. Has an area of 8.06 km² or 8.43% of Lembang. Cikole is a part of the region that is still preserved in nature, the air is cool, and pine forests are still very well maintained. Many tourist destinations are located in the Cikole area such as Jayagiri Resort which has the theme of family tourism, Orchid Forest where most young people take pictures and place of music events, Pine Forest Tourism which is also themed with family education to introduce children to nature, and others.

According to the recapitulation of data from the Culture and Tourism Agency, on average, tourists who come to Bandung spend 2-3 days on a single vacation (Badan Pusat Statistik Kota Bandung, 2018), so the designer decides to make a tourist area in the form of a resort by including recreational and educational tours as supporting facilities. From comparative studies that have been carried out to several resorts in Cikole, designers have not found resorts that in one area can meet the standards that should be achieved in building a tourist area such as easy accessibility, adequate lodging and recreational facilities, as well as complete lodging in the area. And most of the existing resorts are not in accordance with the environmental conditions other than that it does not adjust to the site conditions and pine forests in the design area.

With these problems, it is necessary to design a tourist destination that is multifunctional and adequate in its facilities. The planning and design of the Cikole Forest Resort is intended to create a tourist area that covers all facilities starting from lodging, recreation and education. Carrying the concept of Forest Resort that utilizes a beautiful forest area with the theme of Nature Responsive Architecture, the Cikole Forest Resort will accommodate existing natural resources, especially pine forests which characterize the Cikole region itself by adjusting and responding to the nature around the site.

1.2 Theoretical review

1.2.1 Resort

According to Coltmant, 1895 (in Marlina, 2008) resorts are often found in destination areas that are no longer intended for people who stop for a while. Resort is designed for recreational travelers. This resort can be a simple resort or a luxury resort, and can accommodate various needs ranging from family to business needs. Resorts are usually located in places backed by natural coastal conditions, or locations where facilities such as golf courses and tennis courts are provided.

This is supported by (Pendit, 1999) opinion which says that resorts are places to stay that have various special facilities used by tourists to relax, exercise and get around while enjoying the natural beauty around the resort. Examples of these facilities are golf courses, tennis, spa, jogging track, hiking and so on.

In addition, it is clarified by the opinion of (O'Shannessy, et.all, 2001) that resorts can also be interpreted as a tourism service which has at least five types of services, namely accommodation, food and beverage services, entertainment, sales outlets, and recreational facilities, while for the market from resort businesses namely couples, families, honeymoon couples, and individuals.

A. Characteristics of a Resort

According to (Kurniasih, 2009) Resort has 4 characteristics, namely:

a. Location

Generally resorts are located in places that have beautiful views, such as mountains, the beach and so on, which are not damaged by the hustle of the city, heavy and noisy traffic, "concrete forests" or urban populations. At resorts, proximity to major attractions and associated recreational activities are the main demands of the market and also affect the price.

b. Facilities

Motivation of visitors to have fun and fill their spare time and demand the availability of basic facilities such as sleeping space as a privacy area. Outdoor recreation facilities, for example such as swimming pools, tennis courts, and landscape arrangement at the resort.

c. Architecture and Natural

Tourists tend to look for architectural accommodation and special atmosphere and are different from other resorts Tourists resort users tend to choose a comfortable atmosphere with architecture that supports the level of comfort by not leaving an ethnic image.

d. Markets

The targets to be achieved are tourists who will visit, and vacation.

B. Factors Causing the existence of a Resort

Resort functioned for other than staying as well as recreational facilities, according to (Kurniasih, 2009), Resort emerged by the following factors:

a. Less time to rest

For urban communities who have a busy life that always takes their time to rest comfortably and calmly.

b. Human Needs for Recreation

In general, humans need time to be creative which aims to relax and eliminate boredom from their daily activities.

c. Health

Both the workers and seniors to recover their health need the freshness of the soul and body that can be obtained from the cool air and beautiful scenery that is designed by resort facilities as the accommodation of their lodging.

d. The Desire to Enjoy the Potential of Nature

In urban areas that are crowded and polluted with air pollution it is very difficult to find the existence of beautiful and cool potentials of nature. Thus the desire of urban people to enjoy nature is quite high, therefore resort hotels offer beautiful and cool natural scenery so as to invite visitors and hotel users to be able to enjoy it.

C. Resort Facilities

According to (Kurniasih, 2009), because the target for all who want to enjoy the beauty of nature and the main target of visitors is tourists who are on vacation, have fun and fill their spare time. Then this resort will be equipped with facilities that allow consumers to have fun, refreshing, and fill their spare time. Therefore facilities that need to be available are basic facilities (lodging), indoor recreational

facilities (balconies, restaurants, lounges) and outdoor facilities (high rope area, camping area, resort area, landscape and amphitheater) and other supporting facilities.

D. Resort location

The location of resorts is usually in places with beautiful natural scenery such as mountains, beaches, etc. And as much as possible take advantage of the natural potential around. The ease and proximity of accommodation to and from major recreation areas will have an influence on the value of the resort. According to (Marlina, 2008), resort hotels can be classified based on facilities and location, as follows:

- a. Beach resort
Resorts that are in the coastal area and use the beauty and potential of nature as an attraction.
- b. Mountain resort
Resorts in mountainous areas, facilities and sights that are naturally composed are location strengths that are used as design features.
- c. Forest resort
Resort located in a forest area that has a distinctive character with various types of flora and fauna. Generally it is also used for research and education about conservation of existing protected forests.
- d. Health resort and spa
Resort in the area that has natural potential that can be used as a means for health and fitness through spa activities.
- e. Rural resort
Resorts located in rural areas far from crowded cities. The attraction is in the form of sports facilities that are rarely available in cities, such as: hunting, horse riding, rock climbing and archery.
- f. All suite-hotels
Resort which is a luxury resort group, because all rooms for rent in the hotel are included in the suite class.
- g. Sight-seeing resort
Resorts in areas that have special potential or interesting places such as shopping centers.
- h. Themed resort
Resorts that have a particular theme, usually offer special and unique attractions. For example, like a hotel casino resort.

If based on location and completeness of tourist attractions according to (Marlina, 2008), it can be divided into:

- a. Intergrated resort
Combined resorts are resorts that are usually located in villages or rural areas for vacation spots where the resorts are specially planned. The orientation of the resort is devoted to natural features such as beaches, sea, ski slopes, mountain scenery or has other features such as areas that have a healthy climate, golf courses or other sports facilities or a combination of them.
- b. Town resort
Urban resorts are resorts that combine land users and activities in urban communities, but are economically focused on resort activities which certainly have accommodations such as hotels and tourist service facilities. Some examples of urban resorts are ski resorts, beach resorts, and spa resorts in Europe and North America. Spa resorts in urban Japan and beach resorts in Australia.
- c. Retreat resort
This resort has a smaller scale, usually only 25-50 rooms, but is planned with high quality. It is located in quite remote areas such as mountains or small islands. Access to the resort is usually only via boat or small airship or overpass.
- d. Water Recreation
Recreational water is recreation carried out on water media, both rivers, reservoirs, lakes or the sea. This recreation utilizes the potential of natural waters. The katifitas of recreation are determined by the potential of aquatic nature can be either active or passive. For example, for waters where the water is very bumpy but has beautiful scenery, the activities tend to be passive,

for example Parangtritis Beach, Jogjakarta. Whereas for calm waters, the activities tend to be active, for example Marina Ancol, or Kuta Beach Bali.

From several types of resorts it can be concluded that each resort uses the potential of nature as a view orientation. According to (Ching, 1985; Soetiadji, 1986) orientation is a relative position of a form on the basic plane, the direction of the wind, or on the view of someone who sees it. Oriented and then adapt the local situation and conditions. The following is a type of orientation according to (Soetiadji, 1986):

- a. Orientation to the sun's orbit which later becomes a part that becomes an element of natural lighting. However, it must be noted that in tropical climates irradiation in excessive amounts will cause a problem, so that there are elements that can reduce the blazing effect of the sun.
- b. Orientation to the nearest potential, is an orientation that is more valuable to something, the building can lead to a certain place or building (Ching, 1985), or enough with a positive orientation value that makes it a philosophical relationship related.
- c. Orientation in certain directions, usually leads to relatively far potential, for example the direction of the sea, or natural scenery (Hendraningsih, 1982).

According to (Kustianingrum, Salahudin, Yusuf, and Mulyana, 2012) the orientation of building masses to the natural potential around the site is the basis of consideration and the main point of design, in the form of rivers and hills with green trees. In addition, by maintaining aspects of the vegetation around the site, it can also function as a shade from solar radiation exposed to buildings.

1.2.2 The concept of responsive architecture

Understanding of architecture is the art and science of designing and making construction of buildings, bridges, and so on. Two (2) methods and styles of design for a building construction, while the notion of being responsive according to language means responding, arousing the heart, being responsive or not caring. So if it is concluded, responsive architecture is an architecture that measures and responds to actual environmental conditions to allow the building to adjust its shape, color or character responsively.

According to (Bentley, Alcock, Murrain, McGlynn, and Smith, 2011), seven (7) important points for responsive design are:

- 1) Permeability, ease of access and circulation.
- 2) Variety, there are several different functions in one building or one area.
- 3) Legibility (readability / easy to read), there are forms that are easily identified and help ease orientation.
- 4) Robustness, there are temporal spaces, can be used for a variety of different activities at different times.
- 5) Richness, wealth of taste and experience through material differences, spatial structure, and so on.
- 6) Visual Appropriate, able to identify building functions by looking at the physical, for example for example schools look like schools, hospitals such as hospitals, malls like malls.
- 7) Personalization involves community participation and interaction between humans and the environment.

The Responsive Architecture design theme is felt to be able to support the design of the Resort area, by implementing responsive architecture into the design can help achieve regional design that is in accordance with the state of the surrounding environment by responding to its natural state, and minimize environmental damage.

DESIGN METHODS AND LOCATION

2.1 Design Approach

The approach that will be used to solve design problems based on the type of problem and suitability of the approach, then the architectural approach used in designing this resort are:

1. Approach to Space Functions

The focus of attention of this approach comes from within to produce appropriate designs and pay attention to the function of a space as well as to optimize the space and relationship between space programs at this resort, so that later inter-spaces can integrate well.

2. Location Location Approach / Organic Approach

The focus of attention of this approach comes from the outside, the approach itself illustrates the approach to space locations designed based on ideas that prioritize and optimize the potential of the location. Later the design can look more attractive among many other architectural works, where the state of existence of the situation becomes the most dominant criteria and main attraction in the building, so that the design of the resort itself can have characteristics according to the region and maintain harmony with the design environment.

3. Approach to the Form of Space

The focus of attention of the approach is used to fulfill the explicit design goals which present buildings that have their own characteristics and become landmarks that reflect the image of the area which can later build the branding of the building itself, without neglecting the harmony with the surrounding environment which is the main focus of this Resort design.

4. Approach to Space Limits

The focus of attention on this approach is more on visualization that emphasizes space restrictions. Gambaran Resort that you want to achieve is a resort area that is in harmony with the environment, has recreational facilities that can accommodate visitors' activities that can attract visitors, and make a resort that is not boring and also has its own characteristics that distinguish it from other resorts.

2.2 Location

The position of the design location is in Cikole, Lembang District, West Bandung Regency. Where this location is a destination for tourists who want to stay away from the hustle and bustle of the city with the natural beauty of the area. With Cikole's natural wealth in the form of leafy pine forests, it can make this area an agro-tourism and cultural tourism in the Lembang region. In addition, Cikole is a liaison between Bandung and Subang so that it has quite easy accommodation facilities so that it is suitable for tourism areas. Currently, Lembang has 13 lodging units in the form of resorts. The amount itself is influenced by the high demand for lodging accommodation especially when the holiday season arrives. But of that number, resorts that have complete and well-maintained facilities and conditions are still not completely even.

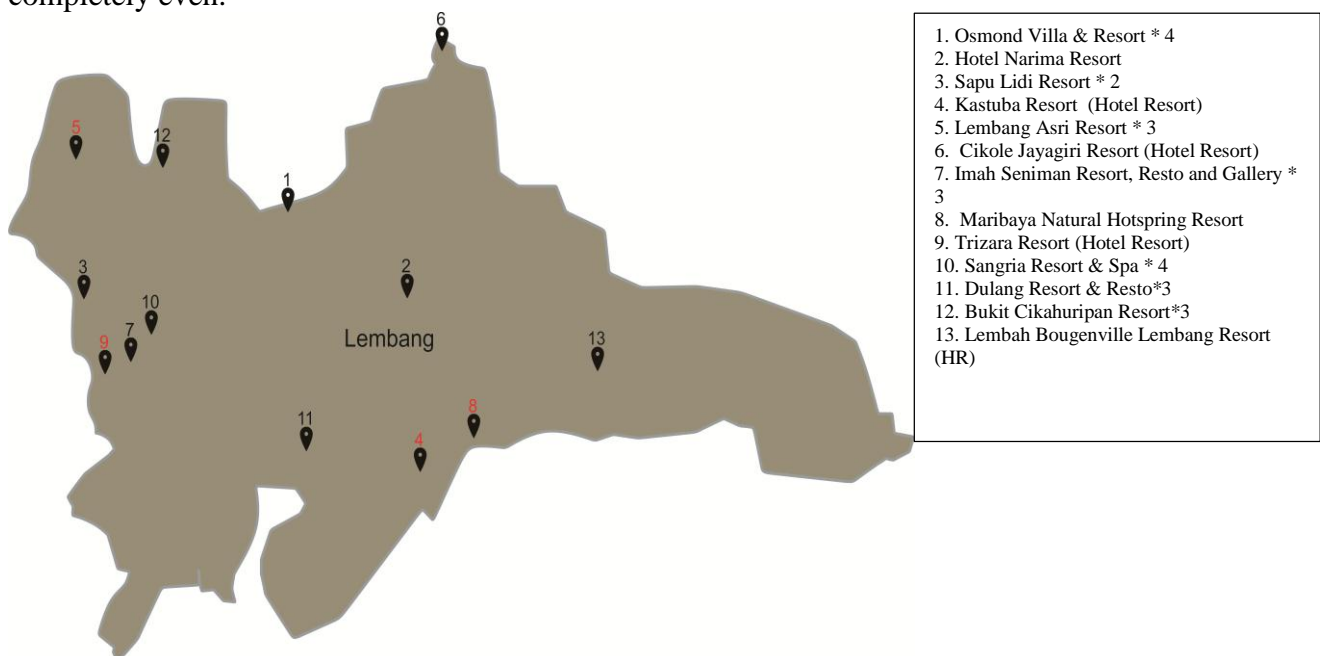



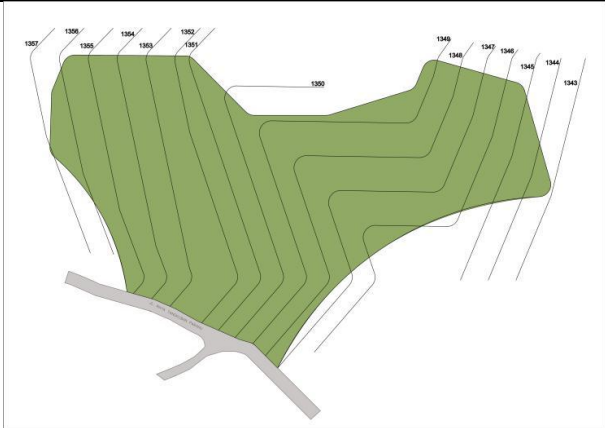
Figure 1 Mapping Resort Hotel in Lembang District

Source: Personal Analysis

Figure 1 is a resort and lodging mapping located in the Lembang District area, from the 13 resorts to only 4 resorts which can be said to be quite complete but there are also those with less accessibility. And it can be seen that the resorts that are available and are considered quite complete have not been evenly distributed, therefore it is necessary to increase the management and construction of accommodation accommodation that is complete and meets existing standards and is easy to access.


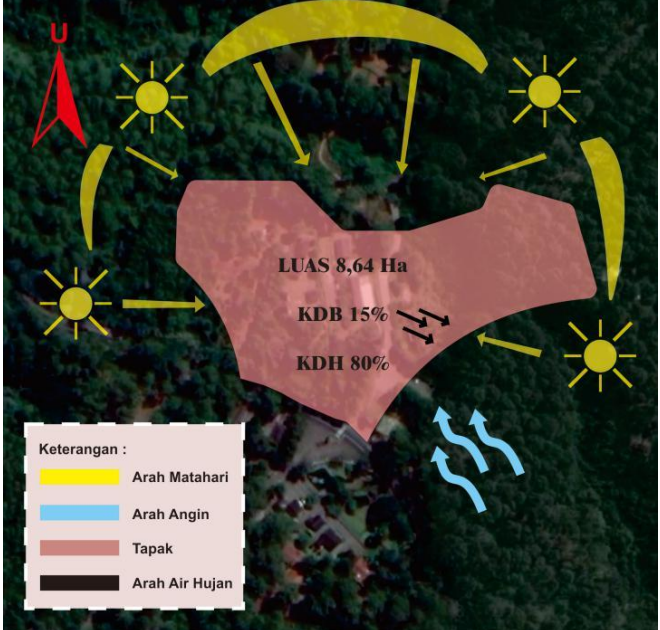
RESULTS AND DISCUSSION

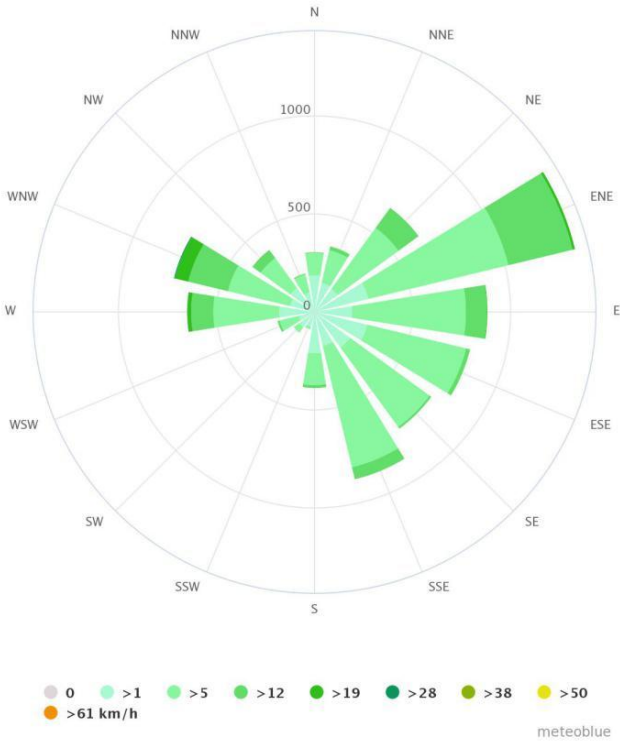
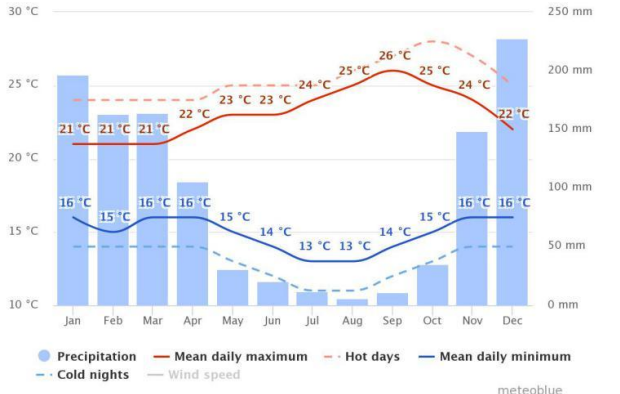
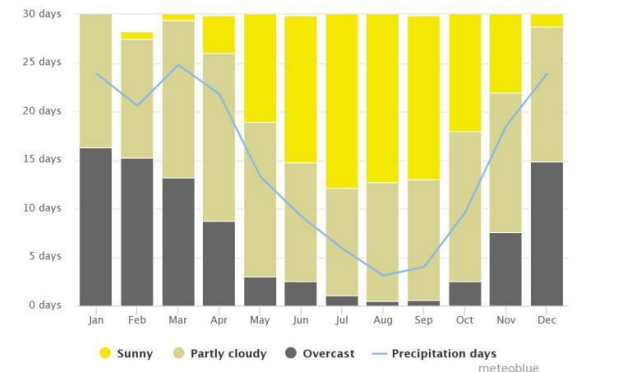
3.1 Analysis, synthesis and response

No	Condition	Response
	Site Location	<p>Tapak is located in Cikole, Lembang District, KBB, West Java</p>  <p>Figure 2 Site Location in Cikole lembang Source: Google Earth 2018</p> <p>In the southwest is Jl. Tangkuban Perahu Kingdom, and other directions the site is surrounded by pine forests.</p> <p>Site size: ± 8.64 Ha KDB: $15\% \times 8.64$ Ha = 1.29 Ha KDH: 80%</p> <p>Analysis: Cikole is an area where most of the area is pine forest far from the hustle and bustle of the city, with cool air and natural conditions that are still awake.</p> <p>Synthesis: Pine forest can be used as a selling point and a distinctive feature of a resort that will be designed besides the location far from the city which is the main destination for visitors who want to calm themselves from the hustle and bustle of the city.</p> <p>Response: The design of buildings in the resort area will be made into small pieces of construction to make use of pine trees in the area, so that it can take advantage of between the spaces between trees.</p>
	Conturs	 <p>Figure 3 Contours Source: Personal data 2018</p> <p>Contour checking uses a pro altimeter, the lowest point on the site has an altitude of 1,343 and each contour line has a height limit per 1 meter, the contour height from the lowest to the highest is 15m.</p> <p>Analysis: The contour on the site is quite tilted but not too steep.</p> <p>Synthesis:</p>

No	Condition	Response
		<p>The contour can be used to place buildings leading to a lower part so that the view can be maximized more, and so that the views from the keview building are not blocked due to differences in ground height.</p> <p>Response: Buildings that require more views such as lodging, are placed on contours that are of a higher height, while in recreation areas are placed in a lower contour, the use of contours is also used in outbound highrope recreation that requires slope for its supporters.</p>
	<p>Drainage Patterns</p>	<div data-bbox="715 495 1342 707" data-label="Image"> </div> <p>Drainage patterns and gutters are next to the side of the main road as shown in the picture above.</p> <p>Analysis: For drainage in the existing land is right beside the main road in the form of solok which is estimated to have a width of 50sm with a depth of 1m. The condition of the area that is still in the form of land.</p> <p>Synthesis: Because existing drainage is only beside the highway, then in the site of the resort area there needs to be a drainage system that can filter out waste from the resort's wastewater, so that the water that comes out and is channeled into the main drainage channel is filtered water. In addition, the condition of the area that is still in the form of land makes rainwater directly seep into the ground, it can be used to create retention ponds which can later be used to be reused for certain needs.</p>
	<p>Circulation</p>	<div data-bbox="616 1245 1278 1711" data-label="Figure"> </div> <p>Figure 4 Circulation on the site Source of personal data 2018</p> <p>The site is right next to the main road, the site only has one road access, namely the main road which is towards the southwest on the site, with a road width of 12m.</p> <p>Analysis:</p> <p>The main road on the site is the only road that has access to and out of the site, has a width of 12m and is a road that connects Bandung-Subang. The site is right next to the main road.</p>

No	Condition	Response
		<p>Synthesis: Because the site is right next to the main road, it will be an advantage, because the accessibility is easy, the resort area will be immediately visible to the drivers who cross besides the road is the only connecting road Bandung-Subang, this is an advantage because later on the holiday season arrives and traffic jams, motorists can rest in this resort area.</p> <p>Response: Circulation on the site can be divided into 3, namely the entrance, the circulation area in the area footprint and service lines. Because the location of the site is right next to the main road, the circulation from outside into the site is made more in.</p>
	<p>Environmental Patterns</p>	<div data-bbox="603 577 1452 1406" data-label="Figure"> </div> <p data-bbox="826 1451 1212 1485">Figure 5 Environmental patterns</p> <p data-bbox="858 1485 1181 1518">Source: Personal data 2018</p> <p data-bbox="582 1518 1452 1619">Many resorts or inns are located in the Cikole region, but in terms of facilities it is still considered incomplete, starting from the accessibility of supporting buildings and facilities in lodging.</p> <p data-bbox="582 1619 702 1653">Analysis:</p> <p data-bbox="582 1653 1452 1720">From the above mapping, it is necessary to have a resort area that is able to provide complete facilities with easy accessibility.</p> <p data-bbox="582 1720 710 1753">Synthesis:</p> <p data-bbox="582 1753 1452 1854">Because lodging in Cikole is already quite a lot, the resort must have its own characteristics and special charm so that visitors can be interested in staying or recreation in this resort area.</p> <p data-bbox="582 1854 710 1888">Response:</p> <p data-bbox="582 1888 1452 1975">Characteristics of reasort can be seen from the shape of each building and the material used, some forms of buildings taken from pine tree formation.</p>

No	Condition	Response
	View to and outside the site	 <p data-bbox="813 907 1220 974">Figure 6 View from inside the site Source: Personal data 2018</p> <p data-bbox="582 1008 1452 1332"> The view from the outside of the site is a pine forest that is still awake. Analysis: The pine tree on the site has a slim, tall stem around 12-18m. Synthesis: Pine trees in the area can be useful as shade of buildings from the sun, besides the slender pine trunks make the distance from the tree to far enough so that it can be used to place cottage buildings such as. Response: Because the view from the inside of the site is pine forests, for its own use it utilizes the height of the contour at the site of the site. </p>
	Climate	 <p data-bbox="734 2016 1300 2072">Figure 7 Direction of Sun, Wind and Rainwater Source: Personal data 2018</p>

No	Condition	Response
		 <p>Precipitation Graphs :</p>  <p>Figure 8 Graph of Precipitation Sumber Meteoblue 2018</p> <p>High precipitation is in December-January, later in the area some retention ponds will be created to store rainwater.</p> <p>Exposure times :</p>  <p>Figure 9 Length of Radiation Metebblue Source 2018</p>

No	Condition	Response
		<p>The highest irradiance is around May-November, because the area itself is pine forest, so the trees around the design are as good as possible used to shade the building from the sun.</p> <p>Maximum temperature :</p> <p>Figure 10 Maximum Air Temperature Metebblue Source 2018</p> <p>Maximum temperature in the area occurs in September, which is 26 with the lowest average temperature is relatively cold, to outsmart it can be applied to building materials that can neutralize temperatures such as wood.</p>

3.2 Responsive Architectural Concepts in the design of The Cikole Forest Resort

1. Permeability, ease of access and circulation.
2. Variety, there are several different functions in one building or one area.
3. Legibility, there are forms that are easily identified and help ease orientation.
4. Robustness, there are temporal spaces, can be used for a variety of different activities at different times.
5. Richness, richness of taste and experience through material differences, arrangement of space, etc.
6. Visual Appropriate, able to identify the function of the building by looking at the physical, for example schools look like schools, hospitals such as hospitals, malls like malls.
7. Personalization, involves community participation and interaction between



Figure 11. Responsive Architectural Concepts in the design of The Cikole Forest Resort
Source: Personal design, 2019

3.3 Design of The Cikole Forest Resort

The condition of the site which is a pine forest and contoured, then the building is made small and a long building is made of split level at the height of the floor, for example: in lodging buildings made cottages.

For building lighting, utilizing a large-sized window measuring 1m-3m wide with a length of 2m-3m, the use of large windows can minimize the use of lights during the day besides, users can enjoy views from inside the building which is a view of pine forest with more freely.

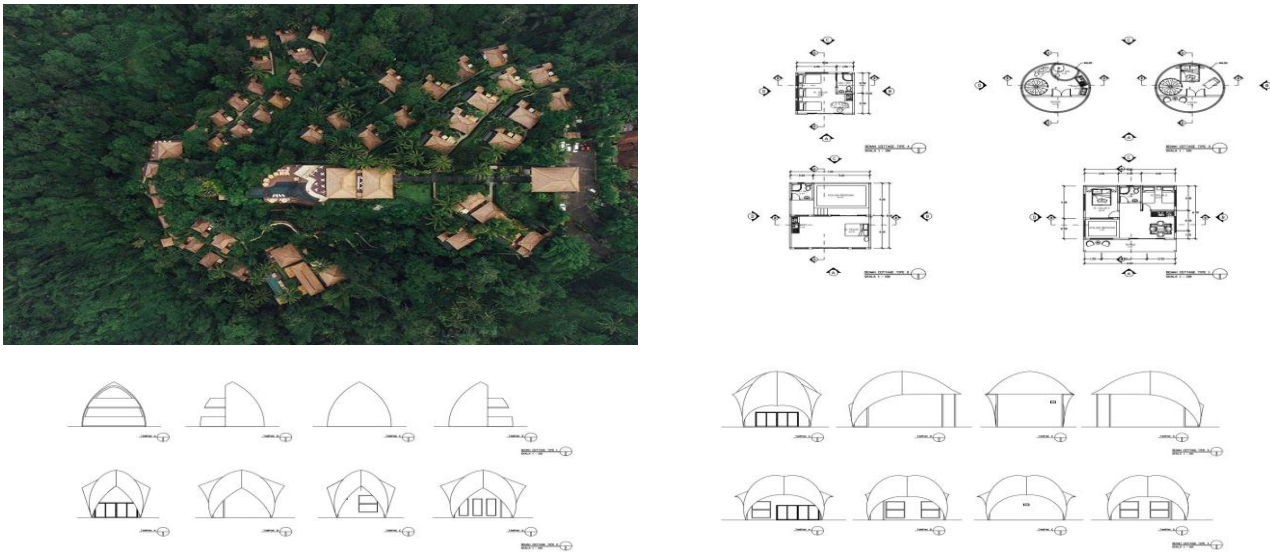


Figure 12. Design of The Cikole Forest Resort

Source: Personal design, 2019

CONCLUSION

There are 3 (three) environmental aspects that characterize the design area, namely: (1) The location of the mountainous region that is not crowded, so that circulation and access to the site are required to be easy. (2) Pine forests, as a pine forest area, there is a good idea that the design will pay attention to the location of existing pine trees, not to damage the existing ones before. (3) Contours, because the area is in the mountainous area, the existing land is automatically contoured, the existing contours can be utilized.

To realize the theme in designing the Cikole Forest Resort, the seven elements found in responsive architecture are applied to the parts of the design of this resort area. In addition, building materials are adapted to the area and environmentally friendly so that later this resort area will become a unit with the surrounding environment.

Application of the theme of responsive architecture into the design which is divided into 7 (seven) important points, namely:

1. Permeability, ease of access and circulation

The design area is right next to the main road, making it easy to access for visitors, besides that Parkran is clearly visible from the entrance because it is located in front of the area.

2. Variety, there are several different functions in one building or one area.

Variety elements are applied to several functions in the area, namely there is a function of lodging in the form of cottages and camping areas, commercial in the form of meeting rooms and restaurants, recreation in the form of outbound highrope and lowrope, amphiteatre and pool area cottages.

3. Legibility (readability/easy to read), there are forms that are easy to identify and help ease orientation.

The grouping of kawasa in each function will be clarified by the division of areas that can be seen from the lane of the area in the site and the difference in road material. On lodging in the form of cottages will be placed on the part of the site which is at a higher contour so that it is easily seen because the cottages themselves are not large buildings other than that they can take advantage of the view towards recreation at a lower contour height.

4. Robustness, there are temporal spaces, can be used for a variety of different activities at different times.

For this implementation, it will be implemented in several functions of buildings and areas such as large meeting room areas that can be used as multipurpose rooms if needed, and amphitheatre area can be used as a communal area facility and can also be used as recreational areas which can later be held at certain times .

5. Richness, wealth of taste and experience through material differences, spatial structure, and so on. Outside and inside the resort area are distinguished, the entrance material uses asphalt to the parking lot, as a feature of vehicle stops, in the resort area vehicles are not allowed to enter, vehicles only go to the parking lot, and inside the resort area use pavingblock material for pedestrians feet so that later the rain water can enter the ground again, besides that the existing grass and land on the land are not much changed, so that visitors still feel prominent natural wealth.
6. Visual Appropriate, able to identify the function of the building by looking at the physical. In its application, each building in this resort area has its own characteristics that can be distinguished from the shape, size and material contained in each building, because each area is also separated it will be easier to identify the building to be addressed, for example: lodging in the form of cottages in the form of small buildings with material in the form of wood and scattered in the area of the site which has a high contour and has a long pedestrian groove, while the building meeting room is quite large and has its own area in the front area.
7. Personalization involves community participation and interaction between humans and the environment
Human interaction with the environment here, visitors can interact with nature directly, besides that, although the resort area is quite private, there are several areas that can be accessed by visitors who do not stay, namely restaurants and recreation areas.

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