

Argowulan Block Design as an Education and Restoration Tourism Area at Bromo Tengger Semeru National Park

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Abstract The aim of this research is to design ecotour location and infrastructure at Argowulan Block. The need of infrastructure is determined by the results of observation with in the field, visitors' interviews, and designs of ecotour activity will be carried out in Argowulan Block. Design image was made through Sketch up version 8.00 animation program, and all data descriptively described. The results show that kinds of infrastructures needed at each cluster are different, they depend on its potential objects of physical condition in field and various ecotour activities might be carried out at each cluster. Based on principal and direction of ecotour development in the Park, no body may change the landscape at all. The fact from this results show that the number of infrastructures in each cluster have no correlation with the number of ecotour activities in it. Furthermore, not all ecotour activities need buildings as their infrastructures; some of them just need tools or equipments. Infrastructures in the Park are still needed to facilitate ecotour activities, regulate visitors' circulation, and add more ecotour interests at that site even though it is located at the rehabilitation zone. Using the infrastructures that has been available, and develop the new infrastructure is the right solution. The results of this research might be considered by the management of Bromo Tengger Semeru national Park if they want to develop Argowulan Block as ecotour locations for education and restoration. The ordinance of the Director General of Forest Protection and Nature Conservation No: P.3/IV-SET/2011 should explicitly prevailed in rehabilitation zone, even just as a public space.

Keywords Cluster, Sketch up version 8.00 animation program, No: P.3/IV-SET/2011

1. Introduction

This study is located in Block Argowulan. In 2006 to 2011 in this block has an area of 159 hectares planted (265,000 seeds) in order that facilitated the restoration Toyota Boshoku and Japan International Forestry Promotion Agency (JIFPRO). Throughout the year 2012-2013 was the last maintenance period after planting stage. Location Block Argowulan approach with Pananjakan, the famous place as a center visit in TNBTS. So far, tourists come to Pananjakan just to see the sunrise, then went to another tourist activities straight to block Laut Pasir - Mount Bromo. There has been no other activity to do travelers in locations near Block Pananjakan than to see the sun rise. Argowulan block has the potential for the utilization of natural attractions. However, its status as a rehabilitation zone. Based on Permenhut No. P 56/Menhut-II/2006 Zoning National Park, there is no description of the activities that can be done in Rehabilitation Zone. Slit (gap) between the potential and the actual status of these zones can be managed more as a new destination

management further by TNBTS (Prabandari, 2013).

This paper is part of my dissertation entitled "Utilization Study of Rehabilitation Zone Block Argowulan Bromo Tengger Semeru National Park as the Education Tourism and Restoration Tourism Area", which has 4 (four) research purposes. The results of the research objectives 1, 2, 3 was written in the paper entitled "Study of Ecotourism Potential in Block Argowulan Bromo Tengger Semeru National Park" (published in the International Journal of Ecosystem 2014, 4 (1): 34-42, mid-February, 2014). Present paper will describe the purpose of the 4th dissertation research above, which specifically addresses the design of Block Argowulan as Education Tourism and Restoration Tourism Area at Bromo Tengger Semeru National Park.

Based on the results of the research objectives 1, 2, 3, are, it is known that block Argowulan has tourism potential in the form of plants, wildlife, landscapes and culture. Combined educational tours and excursions restoration (Edu Resto Tourism) is a concept that is ideal for tourist activities developed in Block Argowulan. One recommendation of the study is the need to develop infrastructure in structuring design Block Argowulan that serves to facilitate tourism activities in each cluster and regulate the circulation of visitors in each cluster (Prabandari, 2013).

Under Director General of Forest Protection and Nature

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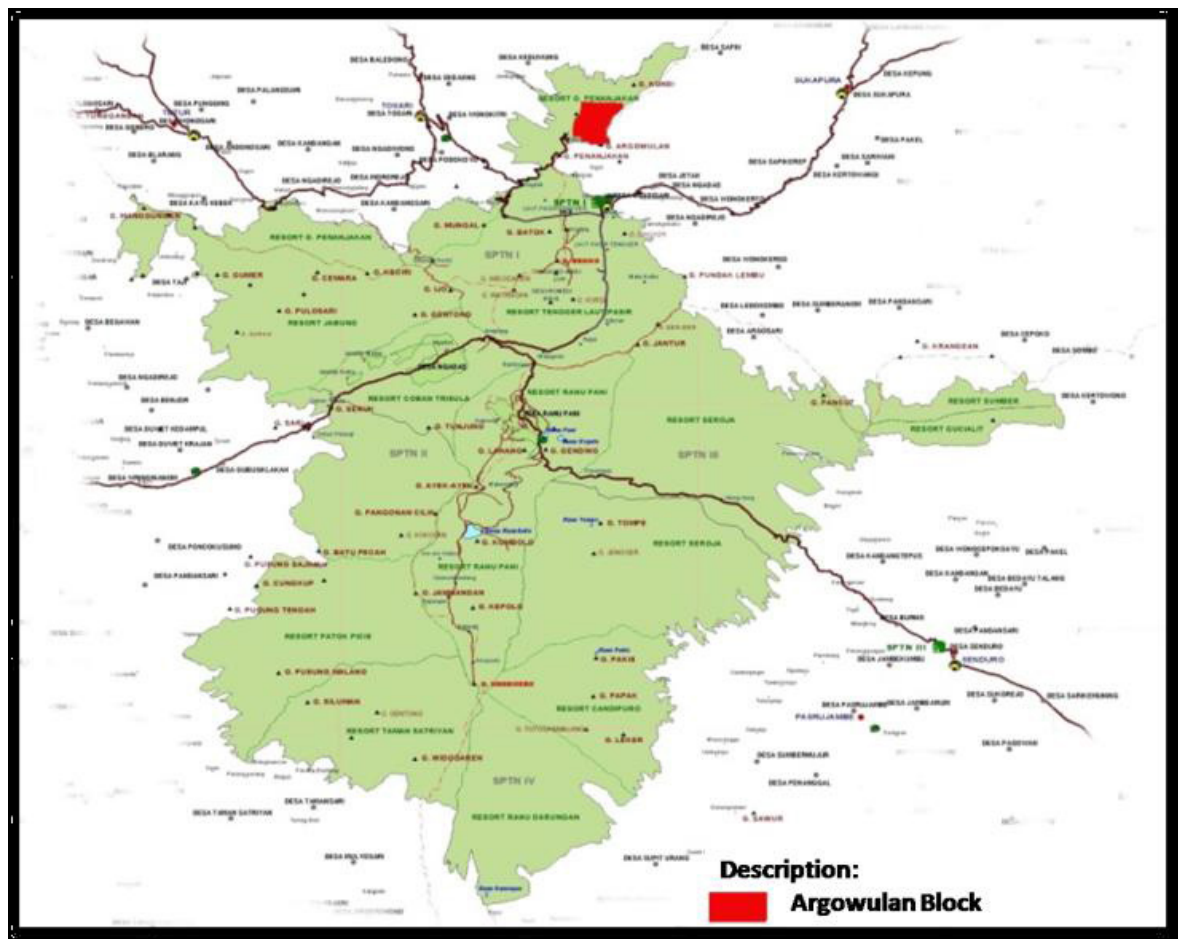
Conservation No. P. 3/IV-SET/2011 Tread Design Guidelines for Preparation of Tourism Management at the Natural Wildlife Refuge, National Parks, Forest Parks and Wildlife Nature article 1, the tread design is understanding the space division management of eco-tourism in the zone / block utilization and zone / block protection / jungle / nautical dedicated to public space and business space provision / nature tourism facilities. Therefore, these studies do not directly provide recommendations on the preparation of the draft tourism management footprint, but more aimed at structuring the necessary site infrastructure to facilitate tourism activities in Block Argowulan when later by managers Bromo Tengger Semeru National Park being used as educational tours and restoration.

The purpose of this study is to find the concept of structuring facilities and infrastructure restoration activities and educational tours (Edu-Resto Tourism) in Block Argowulan. The output is the layout arrangement of point location infrastructure, along with detailed design drawings design (detailed engineering design / DED) the infrastructure. In this paper, the DED is not included or discussed.

The data required is a map of the area Argowulan block, block maps crop up in the first year to V. Data was collected through direct observation in the field (the data of existing infrastructure and the identification of infrastructure needs in Argowulan Block). Then determined the point locations where the infrastructure will be built. Determination on the field, then poured in the location map, layout plan to produce. Each type of infrastructure created design, complete with the detail design drawings (Detail Engineering Design / DED). DED is made to the data using 3D animation programs.

This study was also conducted interviews with respondents to determine the opinion of the design infrastructure that will be built in Argowulan Block. The number of respondents were 30 people (2% of samples taken from the number of visitors Bromo Tengger Semeru National Park per day). Respondents came from a variety of parties, ie student / student, employee, representative of the company (corporate), perpetrators of tourist services, academics, stakeholders forestry. Interviews were conducted by using a questionnaire, the number of respondents representing each party impartial. All data described descriptively.

2. Methods



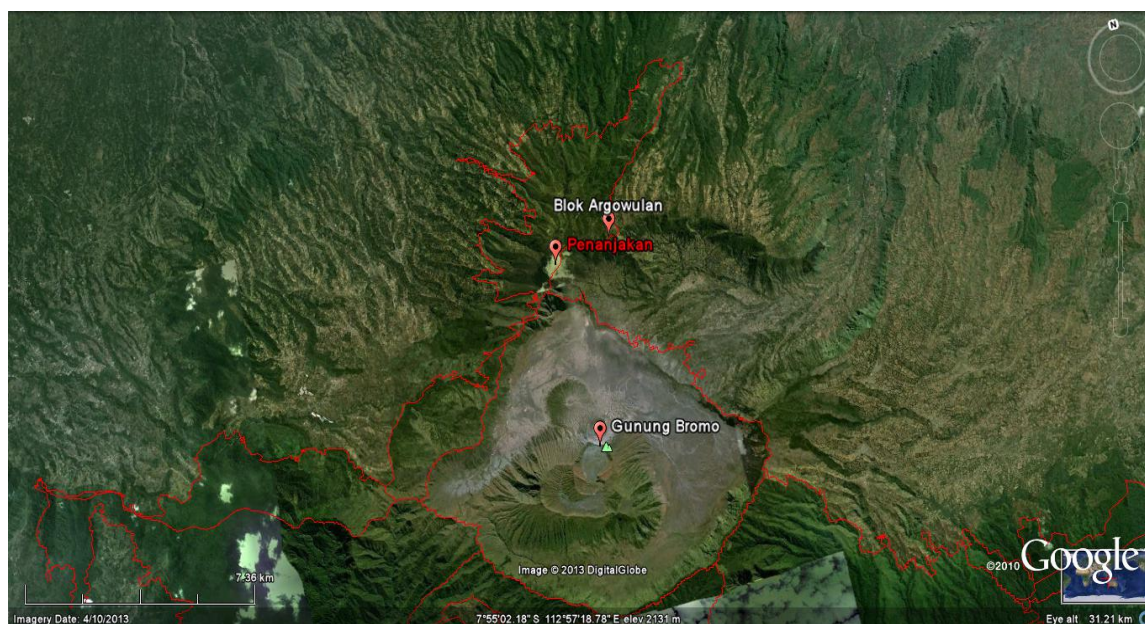
Source: Map TNBTS, 2012

Figure 1. Location Block Argowulan TNBTS

Table 1. Tourism Activity Plans and Infrastructure Needs in Block Argowulanz Location Event Infrastructure Needs

Location	Activity	Infrastructure Needs	
		Supplies	Buildings
entrance - gate	Travel to the location of the entrance	-	entrance - gate
Argowulanz lanes	Choosing intersection travel lanes	-	Sign Board
Cluster 1	1. Planting/replanting.	equipment plant (seed , stakes , ropes , hoes , trowel , bucket , sprayer)	Work shelter
	2. Tree growth observation.	gauge, hagameter, tree identification book	
	3. Ecosystem observation of <i>Vaccinium varingefolium</i> Forest (including its breeding)	Mentigi information books, cameras	
	4. Photo hunting.	camera	
	5. Animal track observation	Gypsum , camera, books introduction of animals	
	6. Medicinal plant observation	guide the introduction of medicinal plants, camera	
	7. Ornamental plant observation	books indentification of flora, camera ,	Shelter
Location	Activity	Infrastructure Needs	
		Supplies	Buildings
	8. Bird watching	binoculars , bird identification book	
	9. Insect watching	loops , nets , insect identification book	
	10. Fun climatology (tree steamflow mesurement, the use of water resevoir)	(steamflow measure on trees , utility water reservoir) hoses, buckets, bottles , tally sheet	Water Reservoir
Cluster 2	Planting/replanting.	equipment plant (seed , stakes , ropes , hoes , / trowel , bucket , sprayer)	Work shelter
	Watching panorama of Bromo Tengger Semeru-Sand Sea.	camera	Shelter
	Tree growth observation.	gauge, hagameter, tree identification book	
	Photo hunting.	camera	
	Animal track observation	Gypsum , camera, books introduction of animals	
	Medicinal plant observation	guide the introduction of medicinal plants, camera	
	Ornamental plants' observation	books indentification of flora, camera ,	
	8. Bird watching	binoculars , bird identification book	
	9. Insect watching	loops , nets , insect identification book	
	10. Fun climatology (tree steamflow mesurement, the use of water resevoir)	(steamflow measure on trees , utility water reservoir) hoses, buckets, bottles , tally sheet	Water reservoir
Cluster 3	Planting/replanting.	equipment plant (seed , stakes , ropes , hoes , / trowel, bucket, sprayer)	Work shelter
	Pole growth observation.	gauge, hagameter, tree identification book	
	Photo hunting	camera	
	Animal (porcupines) tracks' observation.	Gypsum , camera, books introduction of animals	
	Medicinal plant observation	guide the introduction of medicinal plants, camera	
	Ornamental plant (Eidelweiss) observation.	edelweiss flora introduction book , camera ,	
	Bird watching.	binoculars , bird identification book	
	Insect watching.	loops , nets , insect identification book	
	Fun climatology (tree steamflow mesurement, the use	(steamflow measure on trees , utility water reservoir)	Water

	of water resevoir)	hoses , buckets , bottles , tally sheet	reservoir
Location	Activity	Infrastructure Needs	
		Supplies	Buildings
Cluster 4	Planting/replanting.	equipment plant (seed , stakes , ropes , hoes , / trowel , bucket , sprayer)	Work shelter
	2. Tree Adoption	seed , stakes , ropes , hoes , / trowel , bucket , sprayer , tree adopters name signs	
	3. Watching panorama of Bromo Tengger Semeru-Sand Sea	camera	shelter
	4. Sapling growth observation.	gauge, hagameter, tree identification book	
Location	Activity	Infrastructure Needs	
		Supplies	Buildings
	5. Photo hunting.	camera	
	6. Animal track observation	Gypsum , camera, books introduction of animals	
	7. Medicinal plant observation	guide the introduction of medicinal plants, camera	
	Ornamental plant (Edelweiss) observation	edelweiss flora introduction book , camera ,	
	Bird watching	binoculars , bird identification book	
	10. Insect observation	loops , nets , insect identification book	
	11. Fun climatology (frost observation, plant protection from frost, the use of water resevoir)	(steamflow measure on trees , utility water reservoir) hoses , buckets , bottles , tally sheet	Water resrvoir
	12. Cultural tourism of Padmasari	information book of padmasari	Pura (pilgrim place of Tenggerense Hindue), bale-bale (rest area)
Cluster 5	1. Tree adoption	seed, stakes, ropes , hoes , / trowel , bucket , sprayer, tree adopters name signs	
	2. Planting/replanting	equipment plant (seed , stakes , ropes , hoes , / trowel, bucket, sprayer)	Work shelter
	3. Sapling growth observation	gauge, hagameter, tree identification book	
	4. Ecosystem observation of <i>Vaccinium variegatum</i> Forest (including its breeding)	information books Mentigi flora , cameras,	
	5. Photo hunting	camera	shelter
	6. Animal track observation	Gypsum , camera, books introduction of animals	
	7. Medicinal plant observation	guide the introduction of medicinal plants, camera	
	8. Ornamental plant observation	edelweiss flora introduction book , camera ,	
	9. Bird watching	binoculars , bird identification book	
	10. Insect observation	loops , nets , insect identification book	
	11. Fun climatology (frost observation, plant protection from frost, the use of water resevoir)	(steamflow measure on trees , utility water reservoir) hoses , buckets , bottles , tally sheet	Water measurement
	12. Nursery (<i>Acacia decurens</i> & <i>Casuarina junghuhniana</i>)	Books nursery techniques , seeds , sow beds , polybags , soil, manure , bucket / spryer , scissors	cottage discussions
	13. Sight seeing (Pananjakan Hill)		tower view
	14. car port		Parkir area
	15. restroom		restroom



Source: Google Map, 2013

Figure 2. Aerial Photo of Mt Bromo, Pananjakan, Argowulan Block

3. Results Discussion

3.1. Existing Condition Tread Blocks Argowulan

Based on field observations, obtained the following results:

Argowulan blocks are in Zone Rehabilitation TNBTS. Territory management including Pananjakan Resort, National Park Management Section (SPTN) Region I, Region Management Division I. Administratively including Said District Pasuruan regency .

3.2. Needs of Infrastruktur for Ecotourism Activity Plans at Argowulan Block

Each block planting location has its own unique tourism potential, although there are similarities with other blocks; making activities that can be done well adapted to the potential of each block planting. For the purposes of tourism activities, the authors changed the terms of blocks I, II, and so on into clusters I, II, and so on. Based on observations in the field, the study of literature and analysis of VAC, it is designed to do tourist activities in each cluster are as follows:

Development of natural potential in the rehabilitation zone management strategies such as this requires that "caution", such as "new destination "ecotourism, under the management of TNBTS. Tourism activities undertaken to support rehabilitation efforts in the region. In the rainy season planting activities that can be carried into the "main activity" restoration tour; whereas educational tour (with activity measurements of tree growth, frost observation, wildlife observation trail, bird watching , insect watching,

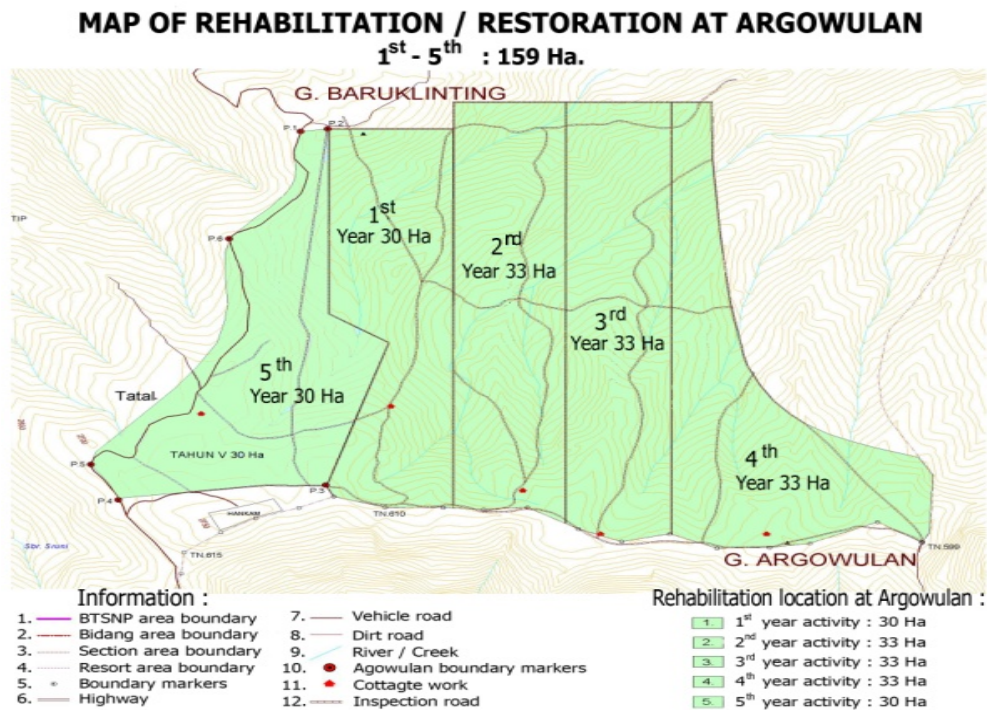
etc.) can be done all the time. Combined educational tours and excursions restoration (Edu Resto Tourism) is a concept that is ideal for tourist activities developed in Block Argowulan.

4. Lay out Planning Infrastructure

Layout plan is drawing plans or functional layout of the building shows the layout of the facilities and infrastructure used for tourism activities, good facilities and infrastructure that already exist or will be constructed (Anindita, 2010). Based on observations in the field and adapted to the need to support the educational tours and restoration, then designed the layout arrangement of infrastructure in Block Argowulan as follows:

4.1. Plan Cluster in Block Argowulan

The location consists of 5 blocks of plants, Block I is the first year of planting blocks, Block II is planted in block 2, and so on. Each block is connected by walkways (cross street that had existed before the ecosystem revitalization project) and road inspection (made when the ecosystem revitalization project for mengececk crop conditions). The road is used by the villagers as the causeway leading Keduwung Pamujan Padmasari and Wonokitri Village. The term cluster is used for naming Block for tourist activities. Cluster 1 is the name for the Block I (ex Block planting year 1). For the purposes of tourism activities, the authors name the block into clusters with a view to a more popular and marketable. This is an image made early before the lay out plan.



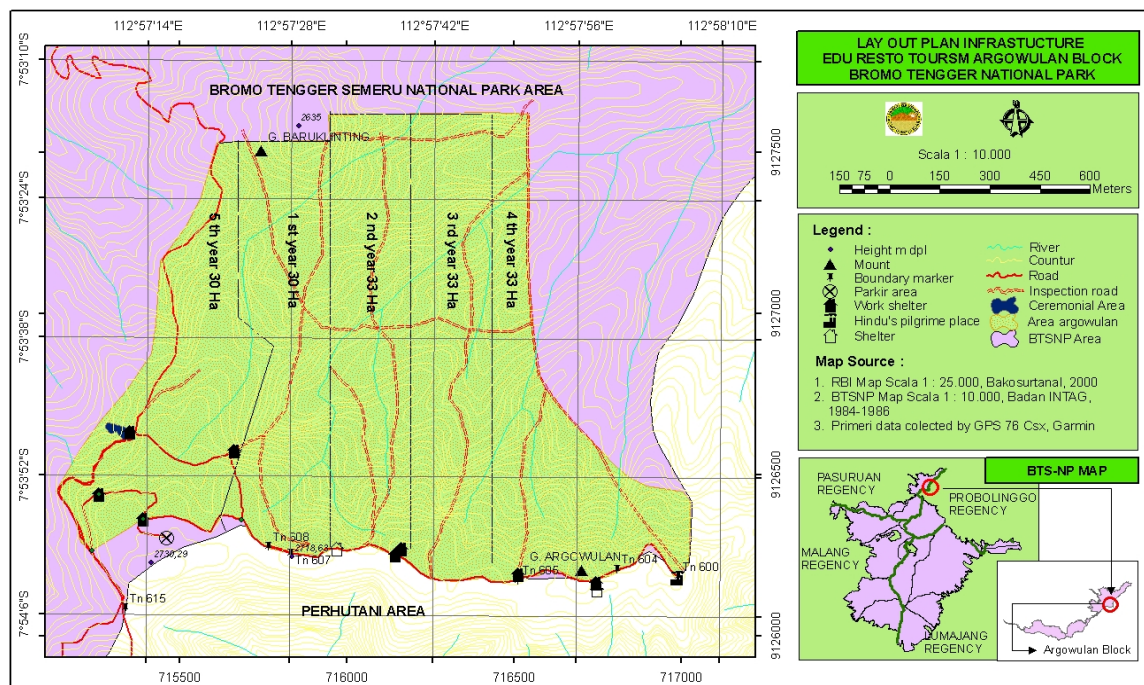
Source: TNBTS, 2012.

Figure 3. Plan early Cluster in Block Argowulan

According to Anindita (2010), the initial stages of the siting and design is penataan field survey to find out the real situation on the ground, including the distribution block or cluster to be developed. Materials needed is a map of location or area map. At this stage also the determination of the location of the point where the infrastructure will be built.

4.2. Lay out Plan

Here is the lay out plan of infrastructure at Argowulan Block.



(Source: primary data, 2013)

Figure 4. Map of Lay Out Plan Ifrastructure at Argowulan Block

Table 2. Data Coordinates and Distance Edu Resto Infrastructure Tourism in Argowulan Block

NO.	Infrastructure	Coordinates		distance (Meter)	Ket.
		LS	BT		
1	Entrance gate	7° 54" 17,50"	112° 56" 56,40"	1.077	
2	Argowulan lanes	7° 53" 59,48"	112° 57" 07,19"	166	
3	Shelter 1	7° 53" 54,84"	112° 57" 07,19"	74	
4	(Pondok 5 junction)	7° 53" 53,88"	112° 57" 10,80"	261	
5	Pertigaan hankam (Hankam junction)	7° 53" 56,24"	112° 57" 13,35"	135	
6	Hankam Park area	7° 53" 58,27"	112° 57" 14,40"	338	
7	Block 1 Junction (Hankam junction - Pertigaan Blok 1)	7° 53" 56,40"	112° 57" 21,60"	340	
8	Shelter 2	7° 53" 59,28"	112° 57" 32,40"	189	
9	1 st shelter work	7° 53" 59,24"	112° 57" 39,60"	410	
10	2 nd shelter work	7° 53" 59,89"	112° 57" 39,60"	304	
11	3 rd sheleter work	7° 54" 01,76"	112° 57" 50,40"	215	
12	4A shelter (1 st shelter at 4 th shelter work)	7° 54" 02,66"	112° 57" 57,60"	26	
13	4B shelter (2 nd shelter at 4 th shelter work)	7° 54" 03,31"	112° 57" 57,60"	192	
14	Padmasari Triangulation	7° 53" 58,67"	112° 58" 01,20"	135	
15	Pura Padmasari	7° 54" 02,09"	112° 58" 04,80"	23	
16	Bale-bale	7° 54" 01,33"	112° 58" 04,80"	-	
17	Pondok 1 junction (Pertigaan Blok 1 - Pondok 1)	7° 53" 49,49"	112° 57" 21,60"	360	
18	5 th shelter	7° 53" 47,26"	112° 57" 11,87"	373	
19	Mentigi View	7° 53" 53,33"	112° 57" 06,54"	190	
20	Tatal Junction	7° 53" 59,48"	112° 57" 07,19"	-	

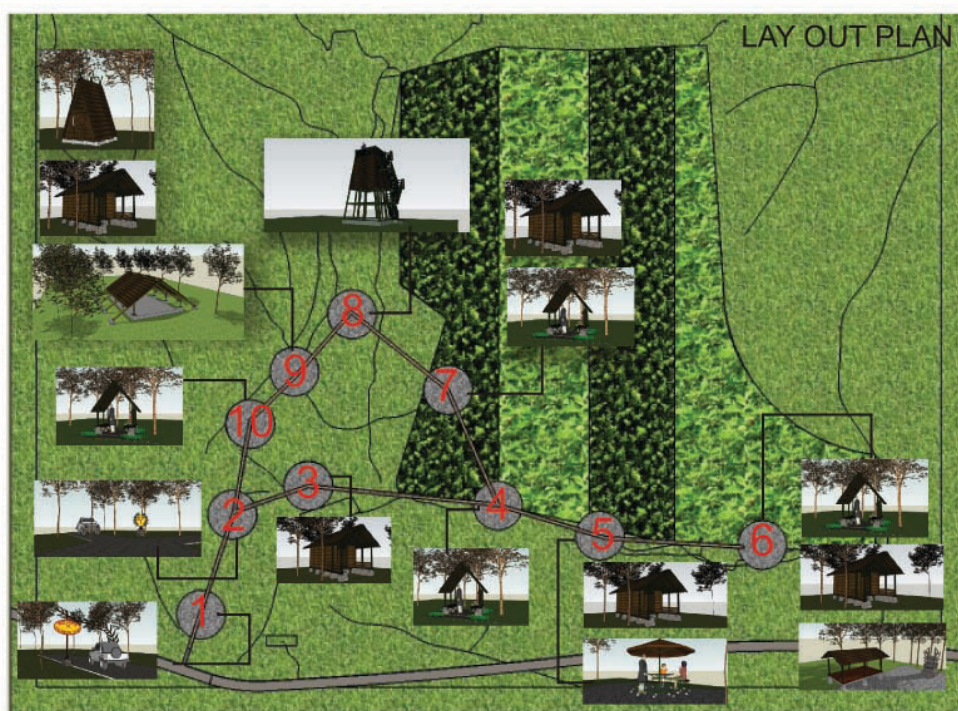
**Figure 5.** Lay Out Plan Infrastructure at Argowulan Block (with Sketch Up Program version 8)

Image building layout plan or layout plan shows the layout functioning infrastructure that will be used for tourism activities, both the means prasarana existing or to be constructed or developed (Anindita, 2010).

The note of the layout is:

- There are 10 (ten) points planned buildings constructed to facilitate visitors educational tours and restoration.
- Laying the proposition parasarana follow the existing

access road. No new roads are made for the purposes of this Tour Resto Edu Resto Tour

c. Lay out also serves as a guide for tourists Edu service Resto Tour in Block Argowulan, especially after Simpang In Argowulan.

d. In Cluster I, II, III, IV, V are the former working cottage once used for storing equipment and supplies at the time of planting Ecosystem Revitalization Project in progress. Up to now, the cottage is still working there. For

the purposes of this Edu Resto Tour, where the work will be retained functions cottage and its location, but the improved quality of the building, used as planting hut (hut for storing equipment plant tour)

e. In Cluster V, more infrastructure because it is the area of the basin, an area more spacious and flat, so the parking lot, restrooms and observation post, the discussion is more appropriate cottage placed at these locations. According Papilaya (2007), determining the point of infrastructure in forested areas should pay attention to the physical condition of the area and the needs of tourists, and complements existing infrastructure.

5. Infrastructure Design

Image design by type of infrastructure is as follows:

5.1. Gate Design



Figure 6. Design of Entrance Gate

The gate is made as signifying entrance to Block Argowulan. This door is located on the highway before Pananjakan. The design is made with a leaf motif, indicating that seem natural and tourist sites with basic planting. To greet visitors, made writing welcome in the tourist education and restoration. According Rahmawati (2005), where the gate serves as the identity of the tourist area.

5.2. Argowulan Lane Design (Argowulan Gate Intersection Design)

In this archway serves as Simpang directions for visitors. From this intersection, visitors were given a choice:

- If going to the right to cluster II - III - IV round trip (Route A: Cluster II - III - IV round trip, parking in the Hankam yard)
- If left will be to cluster V - I commute (Route B: Cluster V round-trip, parking in Cluster V)
- To the right: to cluster II - III - IV, then back to the cluster III through the pass to the cluster I - V (Route C: Cluster II - III - IV - III - II - IV, the drop in Hankam yard, parking in Cluster V)
- To the left: to the cluster V - I then to cluster II - III - IV (Route D : cluster V - I - II - III - IV - III - II , the drop

in cluster 5, parking in the Hankam yard)

With the selection of the route, visitors can enjoy the interpretation of the material presented in accordance interpreter selected routes .



Figure 7. Argowulan Gate Intersection Design

5.3. Shelter Design



Figure 8. Design Shleter in Cluster 2



Figure 9. Design Shelter in Cluster 4

Shelter "is shelter, shade, give a person protection (Echols and Shadilly, 1992). Shelter serves as a shelter and rest while enjoying a panoramic view of nature - Bromo Tengger Semeru Sand Sea. There are two (2) models the shelter. The

first shelter model, created as substations, to see the view of Bromo Tengger Semeru - Sea Sand from Cluster 2. There are places to sit, a place of rest. Cluster II is the first resort if entering via Route A. . Designed slim, because not a lot of flat space at that location. According to Cecilia (2003), the minimalist design is very appropriate to be applied in a limited space, but to maximize the function without leaving aesthetics.

The second model, placed in Cluster 4, serves as a place for enjoy the view Bromo Tengger Semeru - Sea Sand from cluster 4. Made somewhat broad because there is enough space to see the view. Interpretation activities can be done in this shelter environment. The second model reflects the tropical building model, with characteristics resembling shelter roof canopy (Trinugrohoadiwijaya, 2006).

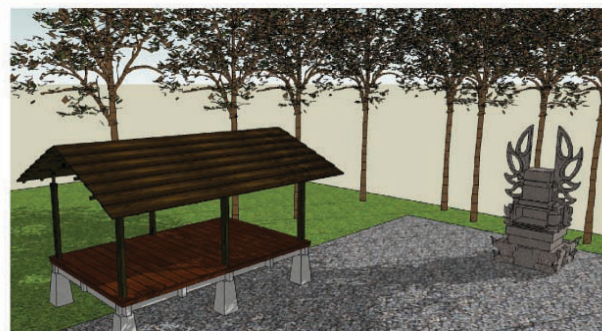
5.4. Work Shelter Design



Figure 10. Work Shleter (Pondok Kerja) Design

Planting cottage located in each cluster, the point is in the former location of the lodge work. Its function is to store the tools that are used for plant and equipment tour educational tour. Other functions for shelter, rest and discussion and interpretation of material delivery environment. The design of the building remains the same with cottage work, only enhanced the quality of the material. According Zaimora (2006), though located in forest areas, the quality of the buildings still need to be considered, it is to extend the life and increase the role of the attractiveness of the region

5.5. The Pamujan Pura Padmasari Triangulasi Design



BALE BENGONG

Figure 11. Design of Bale-Bale and Pure at Padmasari Triangulasi

Pamujan cottage "is a building that serves as a sanctuary or worship of God and the holy spirit ancestors (Prog, 2010). The Pamujan of Padmasari Triangulasi already Cluster IV, but there is no supporting facilities. This role complements pamujan cottage means Tengger Hindus worship at Pure Padmasari triangulated. Its function as a place of rest, a queue waiting for their turn at the same place for prayer, and can be used to hold the event festivity (kenduri, in Indonesian language). Another function is a tourist activity to the material culture interpretation Tengger tribe. According Fandeli (2000), local culture is a part of the element ekotourisme. It is also supported by the results of the study Sagala (2008) which states that the culture of the Tengger be one of the potential that can be managed more as a complement natural tourist attractions in the Bromo Tengger Semeru National Park.

5.6. View Tower Design

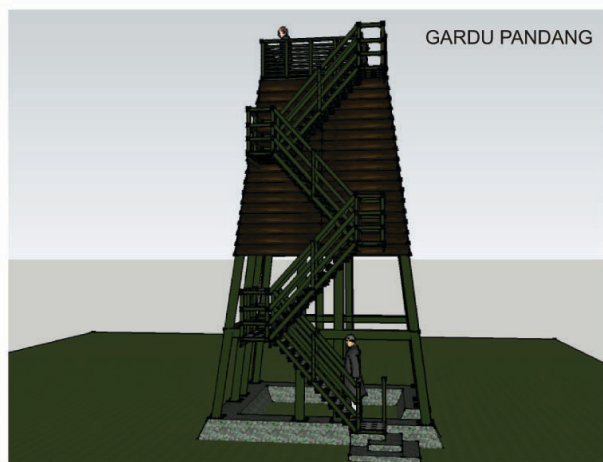


Figure 12. Desig of View Tower

Pananjakan hill scenery and its accessories can be enjoyed with the help of a substation of view (view tower). Around Cluster 5 is a fire-prone area, so the observation post can also function as a fire watchtower. Other functions for activity bird watching, hunting photos and listened to interpreters in presenting material related interpretations.

According Cerochee (2012), building infrastructure nature in national parks should have a function that is integrated with area management activities .

5.7. Discussion Shelter Design



PONDOK DISKUSI

Figure 13. Discussion shelter design

The cottage is a discussion devoted to discussions related to learning nursery or other topics related to the rehabilitation / restoration of forests and forestry and environmental topics. The cottage is a discussion devoted to discussing visitor facilities with a larger amount, about 25

people. While the discussion for a small group (5 people) can do the work at the shelter or cottage. According Navalina (2009), nature tourism operators should be sensitive to the needs of visitors, such as a gathering place, bediskusi, meals, etc.; need to be made to the multi-purpose building to facilitate these activities with an outdoor design.



Figure 14. Restroom Design (Toilet) at Argowulan Block

Table 3. Assessment of Respondents to the Design of Infrastructure in Block Argowulan

No	Type of infrastructure	Percentage of respondents assessment (%)			
		Representative (%)	unrepresentative (%)	Like (%)	Dislike (%)
1	Gate	84	18	70	30
2	Argowulan Gate Intersection	70	30	67	23
3	Work Shelter	70	30	70	30
4	Shelter	90	10	90	10
5	Pamujan Pura Padmasari Triangulasi	40	60	60	40
6	View Tower	73	23	67	23
7	Discussion Shelter	87	13	77	23
8	Toilet	54	46	50	50

5.8. Restroom Design (Toilet)

The toilet is one of its very vital, as they relate to the working mechanism of the body and health. For Block Argowulan, toilets placed at the site visitor arrivals, precisely in the parking area and the former Defense Cluster V. According Rahmawati (2005), building on forest land can be uniquely designed, but must still consider the convenience of visitors. Interestingly, the location of the toilet should not be back to Mount Bromo Tengger Hindus is mecca. It is as the opinion Supriyanto (2008), which states that in the park must not conflict with the local culture.

From interviews with respondents, found that 86% agreed Block Argowulan developed as an Edu-Resto Tourism area although its status as rehabilitation zone and 83% expressed the need to build infrastructure in Argowulan Block. Of 8 (eight) were identified infrastructure means necessary to support Edu-Resto Tourism at Argowulan Block. According to respondents, the order of priority infrastructure required is a gate (17%), toilets (15%), guides or Argowulan Gate Intersection (14%), shelter (14%), view tower (12.5%), discussion shelter (12%), work shelter (7.5%) and pamujan (7%). This suggests that the identity of the region is needed as information for visitors about the tourist areas. Toilet become a major requirement related to the cycle of the human body. Further directions become an important tool for security needs, and shelter as the convenience tools of visitors. discussion shelter, View tower and work shelter are a means of supporting Edu Tour Tourism.

Respondent's response to the design is 69% liked the design of the planned or offered, and 77% said a representative for the purposes of design tourism activities in Block Argowulan. It shows that the tourist infrastructure in the national park become a priority need to facilitate tourist travel performed, regardless of the status of the zone. The opinions of various stakeholders is needed to determine the type of infrastructure that will be held. However, park managers must be selective in determining infrastructure to be built.

More details, preferences and opinions of respondents to per item of infrastructure design is as follows:

From Table 3, it is known that the design of the gates, shelters and discussion shelter are the most representative and most interesting. While the design of the pamujan and toilet assessed as the most unrepresentative and unattractive. This means, that the design is assessed representative and attractive, can be used as a reference for the area manager to create a gateway infrastructure, shelter and discussion shelter on Block argowulan; otherwise, should be made a new design for the pamujan and toilet to be more representative and interesting for visitors. Average representativeness and attraction design, assessed the respondents are still below 75% or moderate category. While not bad, this should be taken into consideration by park managers, so that means that the infrastructure must be in harmony with the physical condition of the pitch and

comfortable for visitors.

Things to consider in building infrastructure building in the conservation area is to be adapted to the conditions of the landscape, combined with local management objectives, and in the functional design and local culture menmpertahikan (Arifin, 2010). Natural materials such as wood, bamboo, metal, stone, and materials selected tiruan can be used to strengthen the impression of a natural area (Hidalgo, 2004).

6. Conclusions

1. Concepts structuring facilities and infrastructure Edu – Resto Tourism, Block Argowulan is a concept that combines the potential of tourism in the region with the needs of an element of tourism activities in each cluster. Priority infrastructure necessary types of visitors in Block Argowulan include infrastructure related to the identity of the region (the gate), urinal facilities (toilets), a means of security and comfort of visitors (driving directions and shelter), and the means of supporting tourism activities (discussion shelter, work shelter, view tower, pamujan). Once the identity of the region, a means of self-related basic needs visitors more priority than the needs of tourist support tools.

2. The type of infrastructure that is needed in each cluster is different, depending on the potential of an object, the physical condition of the field and the variety of activities that can be done in the cluster. The number of infrastructure facilities in each cluster is not related to the number of tourist activities in each cluster. Not all tourist activities require infrastructure such as buildings, some tourist activities only require tools or equipment. Existing infrastructure can be utilized, by improving the design and optimize its function. New infrastructure to complement the purposes of tourism activities.

3. Infrastructure in national parks is required to facilitate tourism activities, regulating the circulation of visitors and add to the attractiveness of the tourist area despite being in the rehabilitation zone. That need to be considered in the design of infrastructure is attractive, convenient for travelers, natural materials, design and layout does not conflict with the local culture. Involvement travelers as the recommendator as well as an assessor of the design infrastructure becomes a critical concern by park managers.

7. Advice

1. Regulation of the Director General of Forest Protection and Nature Conservation No. P. 3/IV-SET/2011 Tread Design Guidelines for Preparation of Tourism Management at the Natural Wildlife Refuge, National Parks, Forest Parks and Wildlife Nature, should also explicitly imposed on the rehabilitation of the national park zone though only as a public space. It can be stated in chapter 1 and chapter

explanations. Completion of these rules will also be in line with the proposal of the Minister of Forestry Regulation No. refinement P 56/Menhut-II/2006 on Guidelines Zoning National Park, where the need to include a description of activities in the rehabilitation zone .

2. Plan activities and Restoration Tourism Education (Edu Resto Tour) in Block Argowulan, in addition equipped infrastructure, need to be equipped with the material interpretation Tourism Education and Restoration.

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