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**Site Inspection Report of the Deputy Conservator of Forests and Wildlife Warden, Thiruvananthapuram in connection with the proposal for Diversion of 57.02 hectares of Forest land at Kottoor for the Establishment of Elephant Rescue and Rehabilitation Centre:**

Date of Inspection: 25/05/2019

A proposal for diversion of 57.02 hectares of forest land under the Forest (Conservation) Act, 1980 for establishing Elephant Rescue and Rehabilitation Centre at Kottoor has been submitted by the Assistant Conservator of Forests, Elephant Rescue and Rehabilitation Centre, Kottoor. Kerala Forest Department is the user agency of this proposal.

The project aims to establish facilities for housing maximum of 50 elephants in the typical natural habitat of wild elephant. The land required lie in three patches with the following details.

Patch No.	Particulars of work	Area in Hectares.
1	Main area of the Rescue and Rehabilitation Centre	56.8654
2	Postmortem and Crematorium area	0.1238
3	Watch Tower	0.030897
	Total	57.002

As per the proposal, forest land required for constructing various facilities is summarized below:

Sl. No.	Particulars of Construction Activity	Forest land required in
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		Hectares.
1	Facilities for Housing Elephants	2.48385
2	Office, Training Centre, Veterinary Hospital etc	1.0323
3	Developing Water Conservation Structures.	1.4150
4	Accommodation for Mahouts, Staff and Officers.	0.5556
5	Developing Water Supply Arrangements.	0.3435
6	Construction of Forest Road in Elephant Zone	1.5970
7	Electrification Works	0.24175
8	Construction of Waster Disposal Facilities	0.1873
9	Developing Facilities for Visitors	0.6257
10	Chainlike Fencing	0.0675
	<b>Total</b>	<b>8.5495</b>

It is stated in the proposal that the following categories of wild elephants would be provided rehabilitation and recapitulation in the Rescue and Rehabilitation Centre proposed to be established:

1. Old elephants in the elephant camps of Kerala Forest Department which needs housing and care in the natural habitat.
2. Wild elephants captured from human-wildlife conflict areas. Presently they are kept in temporary kraals near the elephant camps of the Department. This would adversely affect the possibility of possible re-location in eligible cases.
3. Elephants rescued from private owners for violating the provisions of the Wildlife (Protection) Act, 1972.
4. Baby elephants rescued from the wild due to various reasons.

The project site was inspected by me on 25/05/2019

The proposed area falls in Kottoor Reserve Forest forming part of ABP Range which is a territorial forest Range under Thiruvananthapuram Wildlife Division. The terrain is undulating. The forest in this area is of Tropical Moist Deciduous type. The area selected for developing enclosures for elephants and facilities for office, veterinary hospital and accommodation facility for mahouts, staff and officers fall along the forest boundary. The proposed location of the watch station is on top of the rocky hillock in the eastern side. The site for developing the post mortem and cremation facility lie in the north-east portion.



Major part of this area was earlier under lease to private person for running diary which was taken over by the Department. Acacia plantation was raised in part of the area. Secondary forest growth established in rest of the area. Total enumeration of tree species has been carried by laying sample plots and 89 different tree species have been identified. An estimated total number of 22595 trees exist in the proposed area. It is proposed to fell 2967 trees belonging to 83 species. Predominant tree species found in the area include *Aporosa lindleyana*, *Ailanthus species*, *Persea macrantha*, *Sweitenia macrophylla*, *Olea dioica*, *Actinodaphne madraspatana*, *Hopea parviflora*, *Manihot glazionii*, *Terminalia paniculata*, *Terminalia belerica*, *Xanthophyllum flavascens*, *Alastonia scholaris*, *Careya arborea*, *Dillenia pentagyna*, *Terminalia tomentosa*, *Lannea coromandelica*, *Macaranga peltata*, *Pterocarpus marsupium*, and planted species like *Acacia auriculiformis* and *Anacardium occidentale*. *Aporosa lindleyana* and *Terminalia paniculate* are the most predominant species indicating degraded nature of the forest.

Density of vegetation is around 0.5. The area lies within 1 kilometer from the boundary of the adjoining Neyyar Wildlife Sanctuary. Draft notification of the Eco Sensitive Zone of Neyyar-Peppara wildlife sanctuaries has been issued by the Ministry of Environment, Forest and Climate Change and as per the above notification, it is found that 26.7806 hectares of the proposed area falls in the Eco Sensitive Zone and 30.2195 hectares fall outside the Zone. None of the activities prohibited in Eco Sensitive Zone are proposed in the project. Tree felling will be regulated by restricting the same to the site of actual construction. Thrust is given to rainwater harvesting which is an activity promoted in Eco Sensitive Zone.

The area is presently not vulnerable to erosion. It is seen that the construction of elephant enclosures in the forest area would not lead to erosion. Office and accommodation facilities will be taken up in area which is already having many constructed buildings. As part of the project, two large water holding ponds are proposed to be constructed and the embankment of these structures are in mud. The forest road constructed in the elephant zone will be provided with adequate side protection works and cross drainage works. So the construction activities which are confined to less than 15 percent of the

total forest area will not lead to soil erosion. 85 percent of the area will be kept under forest cover.

It is seen that the proposed area does not contain archaeological and heritage sites, defense installations or any other monument. No tribal hamlets are situated in the proposed land. It is not an area foraged by the tribals for MFP.

The proposed area does not form part of any Protected Area or elephant corridor. The area is included in Agasthyamalai Biosphere Reserve. The establishment of the Elephant Rescue and Rehabilitation Centre will only supplement the objectives of Biosphere Reserve as managing human-wildlife conflict is a thrust area of Biosphere Reserve Activities. Moreover, the Center will provide employment to about 100 tribal youths.

The southern part of the proposed area is not visited by wild animals. Elephants, gaur, sambar deer, porcupines, wild boar, jackal etc are sighted in the northern portion of the proposed area. Rare and endangered species of flora and fauna are not affected by the project.

The user agency is Kerala Forest Department. Most of the activities included in the project are forestry activities. No activities in violation of the provisions of the Forest (Conservation) Act have been taken up in the proposed land.


For raising compensatory afforestation, Kerala Forest Department has identified one patch of non-forest land and two patches of degraded forests. The details are the following.

Sl. No.	Name of Forest Division	Name of Forest Range	Name of Location	Extent in Ha	Present Status
1	Wayanad North	Mananthavady	Banasura	57.07	Non-forest land
1	Thiruvananthapuram Wildlife	ABB Territorial	Nellimoodu	55.57	Open degraded forest
2	Konni	Mannarappara	Mannarappara	37.00	Open degraded forest

There is no scope of tree planting in the non-forest land. It can be protected for ecological reasons.

The user agency has stated that required extent of degraded forest area out of the above patches would be taken up for compensatory afforestation. Many degraded patches exist in the Nellimoodu area and the forest is deficient in regeneration due to annual fire and weed infestation. Eco-restoration activities including enrichment planting would be needed in this area. The area at Mannarappara is degraded plantation included in the eco-restoration Working Circle as per the approved Working Plan. By compensatory afforestation activities the area can be reverted to good natural forest.

Since the area is the fringe forest of typical wild elephant habitat and is accessible through good network of roads existing outside forest and is close to Neyyar Reservoir, a perennial source of water, the site is most suited to establish Elephant Rescue and Rehabilitation Centre.

  
Deputy Conservator of Forests &  
Wildlife Warden  
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