

Revised Master plan Submitted  
to CZA on 6/8/2013 in soft copy.

Submitted  
ED. ABVZP. K. Kam. Bellary Dist.

# ATAL BIHARI VAJPAYEE ZOOLOGICAL PARK

BILIKAL RESERVE FOREST, HOSPET TALUK,  
BELLARY DISTRICT, KARNATAKA



## MASTER PLAN

(Relocation of Bellary zoo)  
2012-2013 to 2021-2022

Old Central Zoo Authority  
Diary No. 27  
Date 11/24/2014

10/14/2013

SUBMITTED BY  
EXECUTIVE DIRECTOR / DEPUTY  
CONSERVATOR OF FORESTS,  
ATAL BIHARI VAJPAYEE ZOOLOGICAL PARK,  
KAMALAPUR.

## PREFACE

Bellary zoo was established in the year 1981 in an area of 2.4 ha .The zoo is located in Bellary city in the compound of the office of the Deputy conservator of forests .Since the area is small ,the area of the enclosures of the animals are not as per the prescribed minimum standard areas by the Central Zoo Authority .Hence it was proposed to shift the zoo to Bilikal Reserve Forests ,near Kamalapur ,Hospet Taluk ,Bellary District in an area of 141.6 ha .The concept plan was approved by the CZA dated 18-12-2012 the same is placed in Annexure-5.

As advised on 18-12-2012 the final Layout map has been sent for approval duly signed by Executive Director – Kamalapur and Member Secretary, Zoo Authority of Karnataka, Mysore. And got the map approved by Member Secretary, Central Zoo Authority (CZA) on 30-12-2012. Approved map enclosed.

This master plan is prepared for the years 2012 – 13 to 2021 – 22. ,but subsequently modifications can be done as per the requirements .The estimated financial outlay is 3431.53 lakhs Rs .The maintenance cost will be borne by the Zoo authority of Karnataka /State government of Karnataka .

During the execution, information will be collected through studies, by visiting zoos of the country and abroad and the latest technologies will be adopted.

  
(S.A.HUBERT)

Executive Director & Deputy / Conservator of Forests,  
Atal Bihari Vajpayee Zoological Park,  
Kamalapur, Hospet Taluk, Bellary District.

## ACKNOWLEDGEMENTS

We would like to express our gratitude to Sri. S.C.SHARMA, and BRIJ KISHORE GUPTA OF CZA, for encouraging, and giving valuable support and inputs and guiding us in preparing this Master Plan.

We express our gratitude to Sri. B.K.SINGH, IFS, PCCF and Sri. DEEPAK SHARMA, IFS, PCCF, wild life, Karnataka, for giving guidance in preparing the project .

We are grateful to Sri. R.S.SURESH, IFS, Member Secretary, Zoo authority of Karnataka , for giving valuable suggestion while preparing the project. We are grateful to Sri. P.C.RAY, IFS, CCF. Bellary circle Bellary for his valuable suggestions.

We convey our gratitude to Sri. B.P.Ravi, E.D., of Mysore Zoo, for guiding in preparation of this Master plan for the zoo.

We convey our gratitude to Sri. S. Manikandhan, IFS, DCF. Bellary Division, Bellary.

We thank Sri. R. Harikrishnan, Architect who prepared layout plan and estimates for the zoo.

We thank all the officers and the staff who have directly or indirectly contributed in the preparation of the master plan.



(S.A.HUBERT)

Executive Director & Deputy / Conservator of Forests,  
Atal Bihari Vajpayee Zoological Park,  
Kamalapur, Hospet Taluk, Bellary District.

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## PART I

### CHAPTER – 1

#### 1. 1. INTRODUCTION

Bellary zoo was established on 1-10-1981 in an area of 2.4 Ha. This is located in Bellary city behind the office of the deputy conservator of forests, Bellary. This zoo was established to provide nature education, to create awareness, to create a place for relaxation and for entertainment of the local public.

The land in which the zoo is established is a plain land, the soil being predominantly black cotton soil. During rainy season the whole area becomes slushy which causes inconvenience for the movement of the visitors to the zoo and also causes health hazards to the animals kept in the zoo. The flora found in the zoo area is Acacia chundra, Albizzia amara, Azadirachata indica, Dodonia viscosa, Lantana camara etc. Since the zoo is located inside the city area no fauna is naturally found in this area.

The climate is very hot in summer, temperature reaches up to 45\* C during the summer. During the winter the average maximum temperature is about 30\*C and the average minimum temperature is about 17\*C.

The annual rainfall in this area is about 800 mm

The land belongs to the municipal corporation, Bellary and is handed over to the Forest department to establish the zoo. Pollution in this area is high due to the movement of trucks carrying iron ore and due to the movement of trains. (Both passenger and goods, especially iron ore)

Since the area available is small, there is no scope to upgrade the enclosures to the specifications laid down by the central zoo authority. However Central Zoo Authority has recognised the present Bellary zoo uptill 2013.

The enclosures and the rooms where animals are kept in captivity do not confirm to the modern scientific standards. The layout plan is given in **Annexure – 1**.

The Central Zoo Authority has also been resenting the present condition of the zoo. Sri T.R.Baalu, the then Honorable Minister for environment and forests addressed a letter dated 25-9-2001 to Sri S.M.Krishna, the then Honorable Chief Minister of Karnataka made a special mention of the Bellary zoo requesting to close down the existing zoo in Bellary and to transfer the animals to other places. He however indicated that the central government would also like to have a modern zoo in Bellary. The copy of the letter of the Honorable minister is placed in **Annexure – 2**. Action has been initiated and an alternative site has finally been located near Kamalapur in Bilikal west reserve forest in Hospet Taluk of Bellary District. The notification of the Bilikal west reserve forest is placed as **Annexure – 3**. The site evaluation report of Sri Patnaik,IFS (Retd.) is placed at **Annexure – 4**.

The present zoo will be shifted to Bilikal reserve forest and is renamed as Atal Bihari Vajpayee Zoological Park.

## CHAPTER – 2

2. 1. The following animals have been kept in the zoo  
Presently following animals are housed in the Bellary zoo.

Sl no	Animal name	Scientific name	Male	female	Sex	Total no
1	<b>BIRDS</b>				unknown	
1	Peacock	Pava Cristatus	4	5	-	9
2	Love birds	Agapornis	21	10	15	46
3	Ducks	Anser Anser	5	2	3	10

4	Pigeons	Columbidae	33	31	9	73
5	Parakeets	Psittacula Kramery	2	2	4	8
	<b>TOTAL BIRDS</b>		<b>65</b>	<b>50</b>	<b>31</b>	<b>146</b>
II	<b>MAMMALS</b>					
1	Tiger	Panthera tigris	1	-	-	1
2	Panther	Panthera pardus	1	-	-	1
3	Bear	Melursus	-	1	-	1
4	Spotted deer	Axis axis	42	48	8	98
5	Black bucks	Antelope cervicapra	50	32	14	96
6	Jackal	Canis aureus	1	1	-	2
7	Rabbits	Leporidae Cunicuals	7	1	2	10
8	Red monkey	Presbytis phayrei	2	-	-	2
	<b>TOTAL MAMMALS</b>		<b>104</b>	<b>83</b>	<b>24</b>	<b>211</b>
III	<b>REPTILES</b>					
1	Star tortoise	Geochelone	3	2	-	5
2	Water tortoise	Geochelone	6	-	-	6
3	Crocodile	Crocodylus				
		Palustris	4	2	-	6
	<b>TOTAL REPTILES</b>		<b>13</b>	<b>4</b>	<b>0</b>	<b>17</b>
	<b>TOTAL ANIMALS</b>		<b>182</b>	<b>137</b>	<b>55</b>	<b>374</b>

**2. 1. 1. VETERINARY SECTION:** Veterinary doctor of Bellary of the Karnataka state government frequently visits the zoo and looks after the general health conditions of the animals .As such there is no veterinary doctor exclusively for the zoo.

2. 1. 2. **STORE AND FEED SUPPLY:** Animals / birds are given feedings of good quality and the prescribed quantity at appropriate times as directed by the zoo authority of Karnataka.
2. 1. 3. **SANITATION SECTION:** the zoo premises are kept clean and then drainages are maintained properly. Disinfectants are regularly sprayed in the enclosures and drainages so that the enclosures are kept in hygienic condition. Full time sweepers are engaged to look after the sanitation in animal cages in the zoo premises.
2. 1. 4. **MAINTENANCE SECTION:** 9 employees' carryout the works of maintaining the zoo. The zoo is kept clean and in hygienic condition. They also look after the feeding to the animals at the appropriate timings. They also look after the solid waste disposal, liquid sewerage, gardens, and landscape sections. Water supply to the zoo is also adequate.
2. 1. 5. **SECURITY SECTION:** The zoo has a compound wall and is well secured. The employees of the zoo look after the security of the zoo.
2. 1. 6. **WATER SUPPLY SECTION:** A bore well in the zoo caters to the needs of drinking and cleaning water for the animals of the zoo. The water is sufficient for the fodder maintenance of the fodder plot as well.
2. 1. 7. **DISPOSAL OF SOLID WASTE AND LIQUID WASTE SEWERAGE:** The employees look after the solid waste disposal of the zoo. The waste is carried away from the zoo premises by the employee's corporation of Bellary .There is a well maintained drainage system in the zoo which carries away the liquid waste.
2. 1. 8. **VISITORS AMENITIES:** There are benches, rest places and toilets in the zoo for the convenience of the visitors .There is a children play area with children play equipments.

**2. 1. 9. LAWNS AND GARDENS – LANDSCAPE SECTION:** A small garden which is maintained by the zoo employees exists in the zoo.

**2. 2. COLLECTION PLAN:**  
Since the zoo is about to be relocated no future plan is laid for the collection of animals.

**2. 3. GENERAL ZOO ADMINISTRATION SECTION:**  
The zoo is headed by the Executive Director (The deputy conservator of forests, Bellary Division, Bellary). The other staffs who look after the zoo are Range forest officer, Forester, Guards, Watchers, temporary workers.

The existing staffing pattern is given below.

<b>Staff Position as on: 25.09.2009.</b>					
Sl. No.	Designation	No. of post	Working	Vacant	Remarks
<b>ZAK Staff</b>					
1	Range Forest officer	1	-	1	Vacant from 01.12.2008 (additional charge of Zoo RFO, Bellary(T))
2	Forester	1	1	-	
3	Forest watcher	1	1	-	
<b>Daily wages workers - 3 labs</b>					
<b>Deputation staff</b>					
1	Animal keepers	-4 No's (Group -D)			Deputed from Bellary Range
2	Sweepers	- 1 No (Group -D)			Deputed from Bellary Range
3	Night watchman	-1 No (Group-D)			Deputed from Bellary Range
<b>Daily wages workers - 3 labs</b>					
<b>Deputation staff</b>					
2 listed labs					
1 contract basis					



**2. 4. RESEARCH:**

No research activities are undertaken as present.

**2. 5. CONSERVATION BREEDING:**

Breeding in case of Black bucks and deer's is incidental and there is no conservation breeding program carried out by the zoo.

**2. 6. EDUCATION AND AWARENESS:**

Education and awareness is imparted to the visitors by displaying signage at the various enclosures.

**2. 7. ANY OTHER ACTIVITY PECULIAR / UNIQUE TO THE ZOO:**

Every year during the wild life week, competitions are being held among the students of the local schools to create awareness and imparting knowledge. Drawing competitions, Essay completions about the wild life and debating competitions are being conducted.

## PART II

### CHAPTER – 3

#### **Future objectives: Including mission statement and theme.**

Zoos are globally recognized as a potent for ensuring the conservation efforts in any country / locality. We have serious environmental problems in Bellary district, therefore it is crucial to enlighten the locals about important of environmental conservation.

#### **3. 1.**

##### **VISION STATEMENT:**

Green Western Ghats clean rivers with perpetual supply of water and fertile agricultural fields needs to be protected and conserved while maintaining the biodiversity and wildlife. Thus this zoo will provide educational as well as recreational facility in the region.

#### **3. 2.**

##### **MISSION STATEMENT:**

To create amongst people empathy for wild animals and motivate them to protect and conserve wild animals and agriculture in this region, and to take up conservation of endangered fauna with special emphasis on Deccan peninsular fauna, research on wild life behaviour and to impart wild life education among the public.

#### **3. 3.**

##### **OBJECTIVES:**

Besides the site is very close to historical site Hampi, where lakhs of tourists visit every year, the zoo will also play a great role in sensitizing towards the ecological importance of wild animals.

### 3. 3. 1.

#### **STRATEGY FOR ACHIEVING THE OBJECTIVES:**

The above objectives are proposed to be achieved by adopting the following location specific strategies for each of them. The following are the objectives for the establishment of the new zoo at Bilkal reserve forest, near Kamalapur of Bellary district.

1. Develop amongst the visitors' empathy for wild animals and motivate them to support the cause of conservation of wild life and to develop amongst the visitors an understanding about the linkages with the life supporting process of the nature.
2. Compliment and strengthen the national efforts in conservation of wild life through planned coordinated conservation breeding of endangered, Vulnerable and threatened wild animal species of the region.
3. Promotion of research on conservation of wild life in captivity.
4. Promotion of conservation, education and awareness.

### 3. 3. 2.

#### **STRATEGY TO REALIZE THE MISSION:**

1. To develop and maintain self sustaining population of physically, behaviourally, genetically healthy animals of all the species housed at the zoo.
2. Display various species in naturalistic settings in enclosures congenial to the animals housed therein.
3. To facilitate the visitors to appreciate and understand the ecological linkages between various species of wild animals, the vegetation supports them and life supporting process of nature.
4. To carry out research that helps in improved housing and upkeep of zoo animals, their breeding and communicating clean and loud conservation message to the visitors.
5. To make the public visit to the zoo a safe, secure, comfortable and rewarding.
6. Planned breeding of endangered species for display purposes in zoo release in the wild if so required.
7. To provide rescue facilities for orphaned / injured and in incapacitated animals.

## CHAPTER – 4

### FUTURE ACTION PLAN

#### 4. 1. PROPOSED ANIMAL COLLECTION PLAN:

The proposed animal collection plan along with the existing animals and proposed numbers and acquisition / disposal of animals is given below. This plan is prepared keeping in new norms of CZA for the animals to be acquired from other zoos and the same has been approved by CZA.

#### COLLECTION PLAN:

SPECIES	EXISTING NUMBER	PROPOSED NUMBER	AQUISITION/ DISPOSAL	REMARK
1. TIGER	1-0-0-1	4-6-0-10	2-3-0-5	REST THROUGH BREEDING
2.SLOTH BEAR	0-1-0-1	4-6-0-10	2-3-0-5	-DO-
3.JUNGLE CAT	0-0-0-0	4-6-0=10	2-3-0-5	-DO-
4.LEOPARD CAT	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
5.RHESUS MACAQUE	2-0-0-2	4-6-0-10	2-3-0-5	-DO-
6.STUMP TAILEDMACAQUE	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
7.BONNET MACAQUE	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
8. NILGIRI LANGUR	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
9. COMMON LANGUR	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
10. SAMBHAR DEER	0-0-0-0	4-6-0-10	2-3-0 -5	-DO-
11.SPOTTED DEER	42-48-8-98	6-14-0-20	36-34-8-78	
12. BARKING DEER	0-0-0-0	6-14-0 -20	2-3-0-5	-DO-

13. BLACK BUCK	50-32-14-96	6-14 -0-20	44-18-14-76	
16. WOLF	0-0-0-0	4-6-0 -10	2-3-0-5	-DO-
17. HYENA	0-1-0-1	4-6-0-10	2-2-0-2	-DO-
18. JACKAL	0-3-1-4	4 -6-0-10	2-3-0-5	-DO-
19. FOX	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
20. LEOPARD	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
21. NILGAI	0-0-0-0	6-14-0 -20	2-3-0-5	-DO-
	<b>AVIAN</b>	<b>FAUNA</b>		
1. GREY JUNGLE FOWL	0-0-0-0	4-6-0-10	2-3-0-5	REST THROUGH BREEDING
2. RED JUNGLE SPUR FOWL	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
3. RING NECK PHEASANT	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
4. SILVER PHEASANT	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
5. GOLDEN PHEASANT	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
6. SARUS CRANE	0-0-0-0	5-5-0 -10	2-2-0-4	-DO-
7. PAINTED STORK	0-0-0-0	5-5-0 10	2-2-0-4	-DO-
8. EURASIAN SPOONBILL	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
9. COMB DUCK	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
10. LESSER WHISTLING TEAL	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
11. BAR HEADED GEESE	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
13. RUDDY SHELDUCK	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
14. COMMON TEAL	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
15. COTTON PYMY TEAL	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
16. GARGANEY	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
17. SHOVELER	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
18. NIGHT HERON	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
19. POND HERON	0-0-0-0	4-6-0-10	2-3-0-5	-DO-
20. CATTLE EGRET	0-0-0-0	4-6-0-10	2-3-0-5	-DO-

21 COCKATOO SULPHUR CRESTED	0-0-0-0	2-2-0-4	2-2-0-4	
22. COCKATOO MOLLUCAN	0-0-0-0	2-2-0-4	2-2-0-4	
23. RED AND BLUE MACAW	0-0-0-0	2-2-0-4	2-2-0-4	
24. RED AND YELLOW MACAW	0-0-0-0	2-2-0-4	2-2-0-4	
25 AFRICAN GREY PARROT	0-0-0-0	2-2-0-4	2-2-0-4	
<b>REPTILES</b>				
1. FRESH WATER CROCODILE	4-2-0-6	2-2-0-4	2-2-0-4	
2. MONITOR LIZARD	0-0-0-0	4-6-0-10	2-3-0-5	REST THROUGH BREEDING
2. GAVIAL	0-0-0-0	2-2-0-4	2-2-0-4	

#### 4. 2. DESCRIPTION OF THE LAYOUT PLAN OF THE ZOOLOGICAL PARK:

The zoological park is proposed to be developed around two natural streams with minimum of visual barriers. The animals shall be given sufficient space for retreat and privacy. The proposed detailed layout plan of the zoo is enclosed in **Annexure – 6**. The same has been approved by Central Zoo Authority (CZA) dated 18.12.2012 and the letter of approval is placed at **Annexure – 5**.

The entrance of the zoo is located 600m away from main road connected through wide approach road. The main road spans through Papinayakanahalli and Kamalapur off Hospet-Bellary state highway. The administrative buildings are located towards northern side of the approach road close to the entrance gate, and visitors amenities zone which comprises ticket counter / interpretation centre, open waiting lounge, restaurant, garden are placed on southern side of approach road along with visitors vehicular parking and safari pickup point. From the approach road service road is branching out with dedicated access controlled entry into the zoo.

The proposed arrangement in the zoological park divided into two types. One is safari park area and the other is zoo exhibit area. The both were bifurcated in such a way that visitors can have option to visit either one or both of these two attractions. The arrangement of enclosures in zoo exhibit area is as per the broad taxonomic classes. This method will be convenient for management, for visitors, for research and for education.

### **ZOO EXHIBIT AREA:**

The proposed arrangements in the Zoo zone are as follow

1. Birds
2. Primates
3. Smaller carnivores
4. Small mammals
5. Reptiles

The animal exhibit enclosures will be located on one side of the zoo road. The road will be formed with more naturalistic shape which would cover all enclosures on its journey from south-east corner and to ultimately merge back into same entry point. Visitors moving towards south-east side would first pass through aquatic bird's enclosure. Next in the row is an array of bird's enclosures like pheasants, peacocks and parrots which houses various species of their respective families.

Then comes a moated primate's enclosures of Bonnet macaque, Stump tailed macaque, Lion tailed macaque and Common langur, followed by small mammals enclosures of Fox, Jackal, Wolf and Hyena. A small visitor resting shelter would be provided in between with wild life conservation sign boards. Towards middle of northern side of the zoo road Leopard enclosure with glass viewing gallery will be provided, next to this enclosures of Leopard cat and Jungle were placed followed by reptile enclosure which marks the end of zoo exhibits.

Store section and veterinary hospital complex along with rescue centre would be located in the space between the zoo exhibit area and safari park area which can be accessible only through service road. This section is isolated and strategically located to cater to both safari and zoo animals with ease. The



administrative and residential zone placed outside the zoological park compound which eliminates the human and animal interference.

Sufficient number of resting places is proposed to be developed for visitors with amenities like drinking water, shade and toilets. Tree groves will be developed to provide shades and natural habitat for bird species.

The layout plan is prepared keeping in mind the future expansion of the zoo exhibits.

#### **SAFARI PARK AREA:**

Totally 70 Ha of area is earmarked for proposed Safari park.

The following safaris are proposed in the area dedicated for safari park.

1. Herbivores safari
2. Tiger safari
3. Sloth Bear safari

The arrangement of safaris is along the main visitor's road and safari roads are branching out with access control entry and exit points for each safari. The safari roads will be interconnected through couple of loop paths to facilitate quick exit during emergencies.

#### **4. 3. DEVELOPMENT OF ENCLOSURES:**

The development of enclosures will be done based on the following considerations.

1. Because of the refractory nature of the topography earmarked for the zoo and availability of minimal plain land / area with gentle slope mostly chain link fencing is proposed as enclosure barrier and moated enclosure is proposed only for primates, which can not only easily climb on the chain link but can also damage it.
2. The animals will have sufficient space for movement.
3. The minimum area prescribed for the respective animals by the Central zoo authority will be adhered to.

4. Suitable environment will be created for the animals so as make the animal feel that the animal is in its natural habitat.
5. The enclosure area will be planted with suitable species to create suitable microclimate and to create shade during hot summer.
6. Good visibility of the exhibited animals by the visitors will be ensured too.
7. The fencing of enclosures will be done by the construction of moats, chain link fencing, toughened glass and other methods as required by the kind of the animals which are housed in the enclosure.
8. The holding area for each animal will also be fixed as per the prescribed minimum area by the CZA.
9. The floor of the holding area will have a slope of 1:30 to enable proper cleaning using pressure water through pipes.
10. Proper drainage systems will be constructed .The holding area will have provision for sliding gates with chain pulley system to enable the required movement of the animal.
11. Service road will be provided to all the enclosures.
12. Proper signage will be displayed at appropriate places to communicate the required information about the animals.
13. Appropriately designed feeding cells for each individual animal of every species would be provided. It would be ensured that every feeding cell unit has adequate aeration and natural light.
14. Appropriate fittings/ structures for enrichment of the environment would be provided in each enclosure to meet the behavioural requirement of the species housed/ displayed.
15. Round the clock potable water supply would be made available at each enclosure.
16. Appropriate arrangement for power supply at every feeding cell/ night shelter unit would be provided.
17. Highest standards of sanitation and hygiene would be maintained at each enclosure in general and the feeding kraals and feeding cells. The flooring and fittings in the kraal and feeding cells shall be so designed that facilities in achieving this objective.
18. Planting of appropriate tree species in requisite number would be done to protect the animals from hot sun by providing adequate shade. Ground flora and shrubs would be nurtured in each enclosure in such a manner that the animals are not unduly exposed to visitors, but the visitors must get adequate opportunity to get the unrestricted view of the animals.

19. Each feeding cell/ night shelter would be provided with a in built squeeze in cage.
20. The enclosure barriers, and all the fitting in the paddocks and feeding shall be made of such design and material that no animal can damage/ tear off/ break down the fittings.
21. Feeding cells/ night shelters should be properly fenced / screened and would be beyond the reach of visitors. The holding area will be hidden behind natural features by suitably camouflaging so that visitors will see only rocky features and not the holding area.

#### **4. 4. PROMOTION OF RESEARCH ON CONSERVATION:**

Promotion of research on conservation of wild life would be taken up in co-ordination with various organizations/institutions.

#### **4. 5. PROMOTION OF CONSERVATION EDUCATION AND AWARENESS:**

With a view to enlighten the visiting public, simple and effective signage boards will be set up at each animal enclosure giving basic information of the distinction, distribution and status of each animal. Sign board will also be set up at prominent places with general information on species, distribution, role of wild life in ecology and the need to conserve them. Interested individuals, institutions are encouraged to take up various activities in the zoo like Shramadan for zoo up keep, contributions for maintenance of certain amenities, adoption of animals, sponsoring for zoo literature, publicity in local print and electronic media etc.,. Special programs of lecture, guided tours, competitions etc., would be arranged to foster love for wild life.

It is proposed to arrange visits for school children through NGOs and volunteers.

#### **4. 6. PROVIDING RECREATION TO PUBLIC:**

Apart from displaying wild animals, lawns, gardens will be established so that the visitor could relax. Amenities like benches, restaurants, toilets will be set up. It is proposed to build monorail transportation, electric cabs for taking the visitors round the zoo. Children play equipments will also be set up with the sponsorship and private agency.

#### **4. 7. LAND STABILIZATION AND PREVENTION OF SOIL EROSION:**

1. Wherever the construction of road/ building/ enclosure involves any cutting of hills slopes, provision of appropriately designed retaining wall and breast wall would be provided.
2. Provision of series of check dams would be made across each water stream passing through the zoo area, particularly above the levels where any building/ enclosures/ walls are made.
3. The vegetation across the hill slopes within the zoo area particularly the ground cover and under storey would be planted with appropriate herb and shrub species.
4. Plantation of bamboo and sacchurm species would be done along the high bank of the water streams.
5. Provision of culverts of adequate size and requisite strength would be constructed to ensure that adequate waterway is available to accommodate the flow of water in the stream even in peak flood time. Appropriate arrangement to arrest the debris and silt load should be made on the uphill side of such structures.

#### **4. 8. UTILITY LAYOUT PLAN:**

##### **4. 8. 1. WATER SUPPLY SYSTEM:**

There is a good potential of ground water in this area, deep bore well would be provided for getting requisite quantity of water for drinking, cleaning and gardening purposed in the vicinity of the water body, below the zoo area. The water taken from the well would be stored in an underground tank constructed for the purpose within few meters from the well. The water stored in the tank would be lifted with the help of lift pump and supplied to over head tanks constructed in the residential area, administrative block, hospital, feed store and animal display area. Additionally, there is a Tungabhadra canal passing close by, from which water can be drawn by obtaining permission from the authorities. A water recycling plant will be set up for recycling the waste water and this water can be used for gardening purposes. Four storage tanks with proper supply networks will be constructed.

**4. 8. 2. SEWERAGE DISPOSAL SYSTEM:**

Sewage from various enclosures, residential complex, administrative block, hospital, feed store shall be carried through pipelines of appropriate dimension to soak pits constructed at appropriate places. A sewerage treatment plant is also proposed and the treated water will be used for gardening purposes.

**4. 8. 3. ELECTRICAL SUPPLY SYSTEM:**

To meet the requirement of electricity in the zoo, Electrical connections will be obtained by KARNATAKA POWER TRANSMISSION CORPORATION LTD. High tension connections will be laid and power supply for the zoo, street lights etc., will be provided. Generators will also be provided so that power is not interrupted during the power cuts.

**4. 9. VISITORS AMENITIES:**

It is estimated that about 5 lakhs tourists visit Hampi annually. The proposed zoo falls in the tourist circuit with Daroji bear sanctuary and hence this proposed zoo is expected to attract a large number of nature loving people. Besides this, efforts will be made to associate schools and expose children to the importance of wild life and conservation ethics. An interpretation center shall be provided to give detailed exposure on wild life conservation through audio usual system. A library with CD-ROM facilities is provided to be built up.

The proposed zoo is about 50 ha. It would be tiring for visitors to go round the enclosures by walking only. Some of the following amenities are proposed to be provided for the movement of the visitors within the zoo area.

1. Battery operated cars/vans will be run all along the main ring road of the Zoo.
2. Restaurants, toilet complexes, resting places, benches, shelters, wheel chairs for physically challenged persons, drinking water facilities, adequate parking facilities, and proper walking paths will be constructed for the benefit of the visitors.
3. Internal paths around the enclosures, service roads for the maintenance of the zoo will also be formed. Proper underground drainage system will be laid out, with main drainage lines and subsidiary drainage links.

#### 4. 10. SECURITY:

The extent of the zoo is very large in the midst of reserve forest which requires additional security arrangements in place. The following arrangements were made to address security concerns.

1. Watch towers are proposed at several locations and at high altitudes.
2. CCTV surveillance will give real time feed to the security section. This feed is to be shared between security and animal section. Complete feed shall be made available to both at the control room, as well as at Curator's room. Similar connection with CCTV's is planned at Entry Gate, Booking counters, to Monitor visitors pressure, and also to watch any pilferage / unauthorized activities at the Entrance.
3. Public address (PA) system is provided inside the zoo premises to convey any important messages. The PA shall be made available to public and in addition to food courts and shops. And the same shall be controlled and operated from security control room.
4. The zoo will have internal communication system in the form of Wireless sets through which communication can be possible with all the keepers, supervisors, and to the required staff to do the monitoring and control of surging visitors / vehicles on holidays / weekends. In addition to that security room, ticket counter and store room from the office of the administrative staff and veterinary hospital will also be connected through wireless.
5. Proper stand-off barrier will be constructed at each enclosure to restrict visitors at safe distance from the animals and ensuring the privacy of animals in its habitat.
6. Check posts and barriers are proposed at various places and frisking of visitors will be done at entrance. Private vehicles will be strictly not allowed inside the zoo premises.
7. Regular patrolling will be carried out at regular intervals to monitor the animals and visitors.

**4. 11. DISPOSAL OF SOLID AND LIQUID WASTE:**

Solid waste of the zoo is disposed off by burning, by burying inside pit and there is also firewood incinerator which is used for disposal of carcass and bones. The dung's are collected and dump inside the pits away from each enclosure which are later burnt and covered.

The disposal of liquid waste is not a problem in the zoo due to its topography. There is no stagnation of water or sewage. Drains and culvert are provided where ever required.

**4. 12. UPKEEP AND HEALTH CARE OF ANIMALS:**

Zoo animals would be provided four fundamental freedoms viz freedom from thirst and hunger, freedom from physical discomfort caused by various climatic factors, freedom to express their natural behaviour in the company of the other animals pertaining to the same species and freedom from pain and agony caused by injuries and sickness.

**4. 12. 1. ANIMAL UPKEEPING:**

1. The enclosures shall be so designed that animals get adequate space and appropriate substrate to express their natural behaviour as well as round the clock supply of potable water. No animal shall be kept locked in the feeding cell/ night shelter for unreasonably long period. The number of animals of each species in the respective animal enclosures shall be such that the group becomes socially and genetically viable. The number would not be allowed to exceed the carrying capacity of the enclosure, in the interest of the safety of the animals and availability of requisite physical space to each individual animal.
2. Zoo shall constantly endeavor to infuse new blood into is animal collection to safeguard against the excessive inbreeding leading to development of congenital defects in the animals. Zoo shall keep a constant vigilance to prevent physical handling of animals either by the zoo keepers or by the visitors as a safeguard against the animals getting unnatural traits.
3. Every enclosure would be provided physical environment and other infrastructure that facilitates the animals getting ample opportunity to display species specific behaviour.



4. All the animals in the zoo shall be provided food which meets its nutritional and behavioural requirement fully. It shall be ensured that feed given to the animal is fresh, infection free and high quality. Feeding would be done at a clean and hygienic surface in a kraal / cell free from pests, feral/ wild counterparts.
5. The health of every animal shall be closely monitored round the clock. Appropriate treatment / medical attention shall be provided as soon as it is found that the animal is sick.
6. Zoo shall take due precautions against the left over feed/ animal droppings/ urination impacting the environment of the enclosure/ kraal/ feeding cell. The same should be removed, washed and disposed off in a manner that no adverse impact is caused on the natural environment of the zoo and the water streams/ water bodies in the vicinity of the zoo.
7. All the operations enumerated above should be carried out in such a manner that all the animals have quality life of adequate longevity and can procreate and help in developing a self sustaining population of all the species housed in the zoo. Acquisition of wild animals by the zoo shall be limited to rescued animals and the founder animals for planned breeding program.
8. Zoo shall keep meticulous records of the daily upkeep, feeding, behaviour sickness, health care and postmortem findings in a manner prescribed by the Central Zoo Authority. The data so collected would be regularly monitored and analyzed to evolve.
9. It need not be highlighted that the operation of the zoo and the management and upkeep of the zoo animals and provision of facilities to the visitors involved scientific and technical inputs from the personnel of various disciplines. Therefore, very specific and detailed chain of command and strong coordination mechanism would be necessary. Regular training programmes/ workshops would be necessary to upgrade the scientific and technical skills of the subordinate staff who would be main poll bearer of the operational and management plan of the zoo.

**4. 12. 2. HEALTH CARE:**

1. Animal healthcare facilities including proper air and light exposure to their retiring cells ensured.
2. Each enclosure will have squeezing cage facility.
3. Separate quarantine wards are proposed for the sick animals to be treated / cared.
4. A well equipped Post mortem ward is proposed with proper platform, sufficient natural light and drain disposal.
5. The zoo should maintain the minimum tranquilizing equipment in good condition with spare equipment capturing to the wild, as follows:

SI.No.	EQUIPMENT	QUANTITY
1	Rifle Model 60	1
2	Blow Pipe	1
	<b>Accessories</b>	
1	4ml. alum. barrel for metal syringe	10
2	5ml. alum. barrel for metal syringe	10
3	rubber plunger	10
4	Needles with collar art. 3040	10
5	Stabilizers art. 3049	10
6	art 2006 chargers for metal syringes	20
7	art 2013 cartridge {yellow}	20
8	cartridge {brown}	20
9	mini ject 3ml	5
10	mini ject 5ml	5
11	wollen stabilizer art 3092	5
12	Needles art. 3068	10

**4. 13. CONSERVATION BREEDING:**

Keeping in view the primary objective of the conservation breeding of endangered species, it is intended to identify some core species for special attention. Species like Hyena, wolf, crocodile and birds of Deccan peninsula will be tried for conservation breeding.

**4. 14. COMPUTERIZATION OF OFFICE WORK:**

There is need for networking all the computers by LAN. Also, internet and email Facilities will be put to use in the zoo.

The entry of visitors / vehicles will be automatically recorded by swiping of the bar coded tickets at the Electronic Gates. This information gets displayed on a monitor at Zoo office. This also helps in motoring the functioning of all gates, as well as flow of visitors at the gates.

**4. 15. ADMINISTRATION BUILDINGS:**

The following buildings structures are proposed to be constructed.

1. Administrative building.
2. Ticket counter and interpretation centre
3. Veterinary hospital
4. Postmortem center
5. Staff quarters.
6. Gift shops
7. Restaurants
8. Security office
9. Store and kitchen.

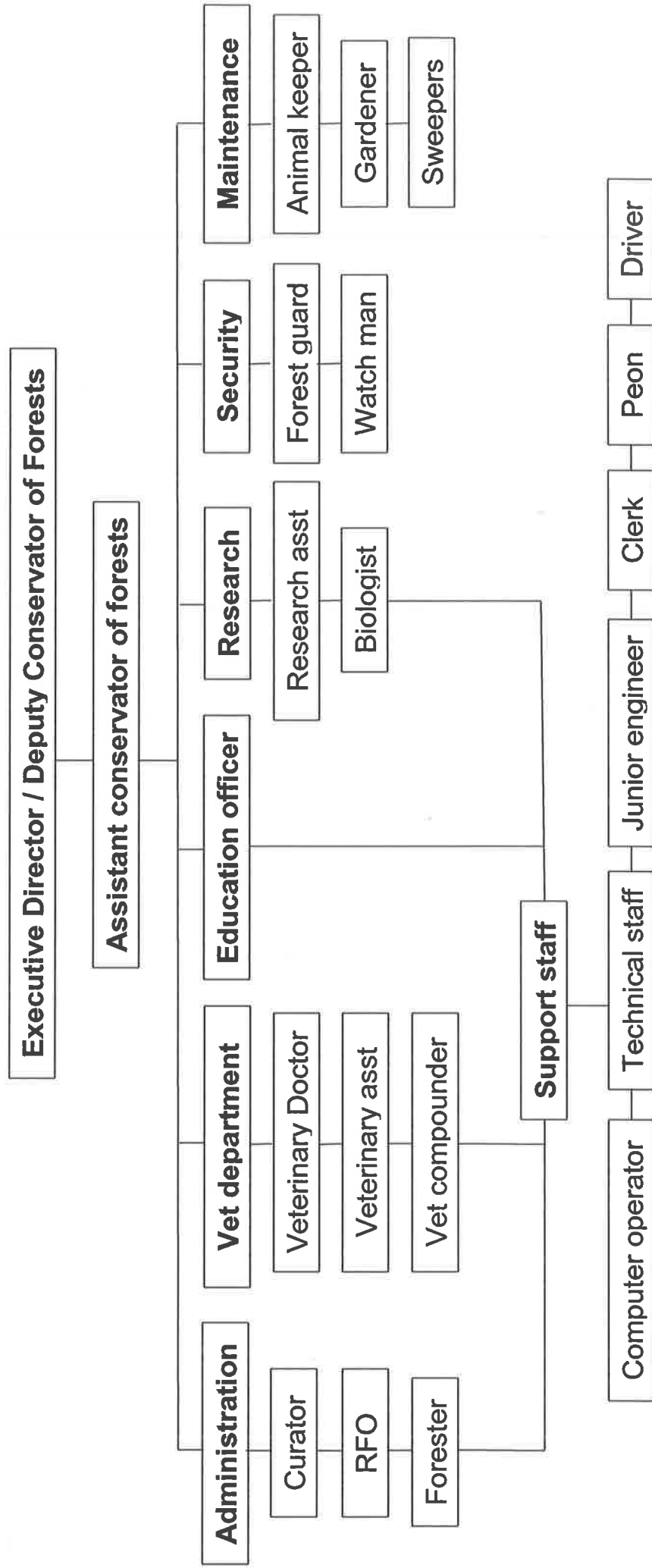
## CHAPTER – 5

### 5. 1. PERSONNEL PLANNING:

Sl. No.	POST PROPOSED	PROPOSED STRENGTH	DUTIES
<b>Administration</b>			
1	E.D./ Deputy conservator of forests	1	Over all in charge for management of zoo
2	Assistant conservator of forests	1	Administrative in charge of zoo
3	Curator	1	Execution of works.
4	Range forest officer	1	Execution of works.
5	Forester	2	Maintenance of zoo.
<b>Animal upkeep &amp; housing</b>			
6	Head Animal keeper	1	Cleaning the cages, feeding of Animals.
7	Animal keeper	7	Cleaning the cages, feeding of Animals.
8	Asst. Animal keeper	12	Cleaning the cages, feeding of Animals.
<b>Healthcare</b>			
9	Veterinary doctor	1	Supervision of health of animals.
10	Veterinary assistant	1	To assist veterinary doctor.
11	Veterinary compounder	2	Assisting veterinary doctor
<b>Education</b>			
12	Education officer	1	Create awareness, trainings.
<b>Research</b>			

13	Research assistant	1	Conduct research activities.
14	Biologist	1	Create awareness, trainings.
<b>Security</b>			
15	Forest guards	3	Assisting in maintenance of zoo.
16	Watchman	6	Watch and ward for the zoo.
<b>Support staffs</b>			
17	Clerk	3	Administration, accounts.
18	Computer operators	2	Office, ticket counters.
19	Junior engineer	1	Engineering works.
20	Peon	3	Assisting in office works.
21	Driver	4	Operating zoo vehicles.
<b>Maintenance</b>			
22	Gardener	6	Maintain gardens.
23	Sweepers	8	Cleaning all premises.
24	Technical staff(blacksmith, carpenter)	2	Animal enclosures, Other works.
	<b>Total</b>	<b>69</b>	

**5. 2. ORGANISATION CHART:**



### **5. 3. FUNCTIONS OF THE STAFF:**

#### **5. 3. 1. EXECUTIVE DIRECTOR / DEPUTY CONSERVATOR OF FORESTS:**

The Executive Director / Deputy conservator of forests shall work as the head of the Office with overall administrative and financial management control of the affairs of the zoos under the general direction and guidance of the PCCF and other senior Officials. To receive grants and contributions and to have custody of the funds of the Zoo Development Committee and to draw, use, utilize, invest and dispose of the same in the manner to achieve the objectives of the Committee.

To prepare the estimates for the current financial and the budget estimates for the next financial years and submit the same to Govt. of India or Govt. of Karnataka as the case may be within stipulated time. It shall be the duty of the executive director to ensure that all the accounts are kept in proper form as laid down in the account rules in force. The executive director shall prescribe the duties to all the Officers and staffs of the Zoos shall exercise such supervision and disciplinary control as may be necessary.

To co-ordinate and participate in deliberation for animal exchanges, reintroduction of the species and technical pursuits concerning zoos conservations. It shall be the duty of the executive director to guide, co-ordinate and exercise general provisions for overall Scientific Research, Management and other activities of the zoos. To organize / conduct Zoo Development Committee's periodical & annual meetings and seminars, trainings etc.

To plan, formulate and execute various civil and other works for the zoos development and to accord administrative approval/ financial sanction for the same. To work as a drawing and disbursing officer for salaries, wages, travels, materials and supplies expenses, advances and other contingencies.

#### **5. 3. 2. ASSISTANT CONSERVATOR OF FORESTS:**

Assistant Conservator of Forests being second in command will be responsible for the Management of zoo. The ACF will be responsible for the Maintenance and security of zoo. To supervise and guide the subordinate staffs to manage the zoo. To supervise the plan and design of the construction and



modification of the animal enclosures, houses, cages etc. and other infrastructure required in order to meet the physiological and biological needs of the animals.

To take action for planned prospective breeding of the animal collection. To deal with the correspondences pertaining to animal exchange and ensure for safe transportation of the animals for the purpose. To ensure proper maintenance of live stock and other inventories of zoo. To promote educational programmer in zoo and environment conservation. To facilitate basic and applied research studies on the behavioural, nutritional and breeding aspects of important indigenous species. To maintain law and order in the zoo and any other work assigned by the curator.

### **5. 3. 3. CURATOR:**

Upkeep and maintenance of animal collection and animal housing, including cleaning and disinfection of animals and enclosures, feeding of animals, keeping a close watch on general health conditions of animals and ensure to treat sick animals on priority basics including crating, shifting and transporting of animals within zoo premises.

### **5. 3. 4. VETERINARY DOCTOR:**

To plan and establish adequate veterinary facilities in the zoo hospital and submit the details of requirements accordingly. To study specific causes of morbidity and mortality and accordingly formulate and adopt measures to prevent diseases among Zoo collections. To undertake the operation of chemical immobilization of animals as and when required and to handle surgical and obstetrical problems. To supervise the sub-ordinate staff of Veterinary Section, Commissary Section and sanitation Section. To prescribe and check the routine animal diet articles and drinking water quality. Frequently visit the zoo animals to checkup health problems and dispense necessary medications. To treat sick animals in the enclosures or at zoo hospital and conduct pathological and microbiological examinations for specific diagnosis of etiology of the condition. To conduct post mortem examination and to collect specimens for Laboratory investigations. To maintain records regarding medical history (In-patient Register, Out-patient Register, Treatment Cards, PM Register and Reports) of animals and disease investigation. To procure, maintain and keep records of equipments and medicines, vaccines reagents

and chemical etc. related to the Veterinary Section. To conduct basic and applied research in the field of Wildlife health.

**5. 3. 5. RANGE FOREST OFFICER:**

To ensure proper management of the zoo with regard to land resources, assets created enclosures, Landscape and Tourist traffic etc. To ensure security in the zoo premises round the clock. To curb vandalism and take preventive measures to safeguard zoo property and safety to visitors. To check entry of vehicles and regulate the gate entry tickets by posting necessary ticket collectors/ticket checkers and adopt methods deemed fit to avoid mal practices at the main gate. To keep liaison with the police authorities in maintaining law and order problems in the zoo premises.

To entertain public complaints with regard to zoo and take follow up action and submit progress report to the superiors. To maintain records of all the immovable property, valuation and the taxes paid thereof.

To maintain valuation records of places, sheds, enclosures, plants, equipments, machines, crates, trolleys, vehicles etc. To get audit of all the store stocks as and when required and prepare replies for the audit objection regarding the same. To procure License and CITES Certificates for import and export of live Zoo animals. To provide specific instructions and specifications about preparation of Air courier to carry live animals shipment as per rules.

**5. 3. 6. FORESTER:**

To guide and supervise the junior staffs working in the estate section and maintain their leave records. To take necessary action for procurement of liveries and other non consumable items required for the maintenance of office and field. To take action and dispose of all the unserviceable articles. And weeding of files and papers. To arrange materials and supplies required for work in workshop, carpentry, machinery and printing works, repairs and modifications of cages and enclosures. To supervise all the works of repairs, renovations, modification and preparation of cages and crates. To arrange management of all the field equipments of different sections in working conditions.

And in the event of any untoward happenings report to higher authority about the same. To report all the lost and found properties to the Superiors/ Range Officer/ Forester. Any other duty assisted by the superiors.

**5. 3. 9. ANIMAL KEEPER:**

To clean regularly the animal night shelters/houses/crawls/enclosures of animal's wastes, left out food and undesirable objects etc. Regular cleaning of water troughs. To ensure timely feeding and watering of animals. To report to the superiors about the health condition heat, mating, breeding and feeding condition and other observations immediately. To report to the superior-any damage to the enclosures, cages, structures etc for immediate repair. To remove all the foreign materials from the animal enclosures.

To assist in capture, crating and shifting of live animals as and when required and to take dead animals to hospital/ post mortem room for PM examination. To ensure safe and proper custody of Beat furniture's, records, equipments and animal diet medicines etc. To protect the animals from teasing and vandalism, damage to enclosures and signboards fittings and to ensure security of the Zoo and its inmates. To check and ensure proper locking of the enclosures/ cages/houses at least half an hour before the Zoo is closed any other duty assigned by the Head Caretaker.

**5. 3. 10. DRIVER:**

Operation of Zoo Vehicle and undertaking its petty maintenance works. Maintenance of vehicle trolley. Maintaining log book. Any other work assigned by the supervisors.

**5. 3. 11. TECHNICAL STAFF:**

To undertake all the fittings, turning and welding works in animal enclosures, cages, houses, cells, squeeze cages and repair and modifications of doors, windows, shelters and repair of all transportation cages, garden implements and machines. Fabrication of frames of transport cages and crates and making of small implements for cleaning works. To prepare and repair wooden animal crates, cages, nest boxes, wooden shelters, doors and windows of the enclosures, houses, cages and public notice

and directional boards and their fixing at the convenient places. To put animal descriptive boards on the enclosures. To undertake all the water works. Maintenance of electrical installations and generator set. To assist education section in organizing exhibitions and displaying and fitting, fixing boards etc.

**5. 3. 12. WATCHMAN:**

To watch over and guide the Zoo properly. To assist the animal and garden section staffs in curbing vandalism and preventing any undesired activities in the Zoo premises. To check public vehicles entering the regulate the movement of visitors at the time of heavy rush. To maintain and enforce security of the assets in the duty areas and in the event of any untoward happenings report to higher authority about the same. To report all the lost and found properties to the Superiors/ Range Officer/ Forester. Any other duty assisted by the superiors.

**5. 3. 13. CLERK:**

To look after ministerial and administrative work and give timely noting and drafting on the policy matter. To handle and process all the recruitments, disciplinary and other cases of class III and IV employees. To draft clear, precise, noting and communications about the administrative and service matters. To process matters of incidents, honorarium, awards, fees, vigilance, disciplinary action etc. Attend to legal matters and audit replies. To take action to invite tenders for diet articles, medicines, stationeries, hardware item and civil works etc. well in advance for the commencing financial year and their finalization. To look into budget matters. Procurement, storing and supply of stationery. Verification of log books of vehicles/generator. To supervise movements of files, documents, guard files and other correspondences. Taking necessary measures for reduction in administrative work expenditure. To ensure timely preparation and submit all annual reports. To process matters of recruitment, promotion, transfer, superannuation, pension benefits, increments, leave, and selection grades, leave salary and pension cases etc. of employees. To ensure proper entry of records in the book or Service roles of the Zoo employees and keep them in safe custody.

**5. 3. 14.**

**PEON:**

Maintain all files in safe custody in the record room. Making available files as and when required Weeding and dusting of files. To lift the files in the administration section. Dusting and weeding, delivery of letters and assisting the officials and staffs in their day to day work Attending to the all personal and professional requirements (related to official works) of the officer concerned. Accompany and attend to the officer concerned on tours or during field visits as an orderly, if desired so. Weeding and dusting the official chamber and files etc. of the officer concerned.

**5. 3. 15.**

**COMPUTER OPERATOR:**

Preparation of resource inventory including wild life and development works under the guidance of superior officers. Preparation of Management plan and perspective planning under the guidance of superior officers. Preparation of general periodic returns under the guidance of superior officers. Preparation of annual plan of operation, Budgeting Monitoring & Evaluation under the guidance of superior officers. Resource inventory such as vehicles, arms, wireless network and other equipment under the guidance of superior officers. Documentation of resources under the guidance of superior officers.

**5. 3. 16.**

**JUNIOR ENGINEER:**

He should look after all the engineering works in the zoo premises .He should monitor the maintenance of roads, enclosures of the animals, buildings, water supply, electricity supply and other related works assigned by the superiors.

**5. x3. 17.**

**EDUCATION OFFICER:**

To create general awareness and sensitivity in public about the preservation of wildlife by providing literatures, zoo guide books, handouts, leaflets and organizing audio visual shows, films, exhibitions and competition and teaching lectures about exhibits in zoo. To conduct periodical surveys and analyze the visitors about wildlife at zoo. To assist in various periodical training programs, workshops, seminars, symposia on wildlife management organized by The Zoo authorities. Coordination with other sections of

the Bird Park and zoo for publishing annual reports, bulletin, treatise etc. Taking rounds in display areas and educating the public not to tease zoo inmates, throw stones and food articles into the enclosures. Arrange smooth running of Nature Interpretation Centre in the zoo.

To plan and design standardized signage's system giving complete scientific description of the exhibits at zoo. Maintenance of zoo library. Procuring catalogues and maintaining books, Periodicals, scientific documents etc. in the library. Issue and receipt of library books. To maintain records and files, photographs, TV/DVD in all the garden implements in working condition. To maintain all the relevant expenditure records and inventory of the garden section.

#### **5. 3.18.**

##### **RESEARCH ASSISTANT:**

To guide and supervise the personals, involved in Research and Education at zoo. To conduct basic and applied research studies on ecology, physiology and animal biology and behaviour of birds and animals at zoo. To maintain Stud books, history cards of various animals at Bird Park and Biological Park. To maintain Stud books, history cards of various animals at zoo. Conceptual planning development and execution of interpretative educational programmers & interpretation center at zoo. To plan and design standardized signage system giving complete specific description of an exhibits at zoo. To assist the management in organizing various wildlife trainings, seminars, symposia, workshops and practical orientations and expositions. To procure audio-visual aids, required for documentation and production of various scientific and technical events store information and data to help wildlife management and education. To produce various publications like zoo guide books, brochures, handouts, leaflets, annual reports, magazine and management plans etc. To undertake the landscaping of the zoo premise. Any other work assigned by the seniors.

#### **5. 3.19.**

##### **BIOLOGIST:**

Making observations on the behaviour and biology of animals in groups / herds and maintaining meticulous record card of the same, ensuring their upkeep including provision of special diet for pregnant females, nursing mother, newborns / new arrivals, infirm and sick animals, preparation of animal inventory, education, research on behaviour and biology of animal, training, genetic

management of animals by formulating breeding policy and animal exchange. He is also responsible for enrichment of animal enclosure and preparation of brochures, booklets, CDs, signage etc.

### 5. 3. 20.

#### **GARDENER:**

To maintain lawns and gardens of the Zoo by regular watering, fertilizing, hoeing, weeding and outing grasses. To plant shrubs, herbs, hedges, trees and other adornments on the lawns and grounds. To raise

And maintain plant nursery for replenishing plants and tree collection of zoo premises. To do timely weeding, lopping and pruning of undesired vegetation and suitable use of disposed and decaying vegetation, fallen dead trees and debris. To clean the wastes left by the visitors in the lawn. To report to superiors and control damaging of lawns and grounds by the visiting public. To ensure up-keep of nursery required for plantation, propagation of trees shrubs, herbs, climbers, hedges etc. in the entire Zoo area. Any other duty assigned by the superiors.

### 5. 3. 21.

#### **SWEEPERS:**

To clean regularly the animal night shelters/houses/crawls/enclosures of animal's wastes, left out food and undesirable objects etc. Regular cleaning of water troughs. To ensure timely feeding and watering of animals. To report to the superiors about the health condition heat, mating, breeding and feeding condition and other observations immediately. To report to the superior-any damage to the enclosures, cages, structures etc for immediate repair. To remove all the foreign materials from the animal enclosures. To assist in capture, crating and shifting of live animals as and when required and to take dead animals to hospital/post mortem room for PM examination.

To ensure safe and proper custody of Beat furniture's, records, equipments and animal diet medicines etc. To protect the animals from teasing and vandalism, damage to enclosures and signboards fittings and to ensure security of the zoo and its inmates. To check and ensure proper locking of enclosures/cages/houses at least half an hour before the zoo is closed. Any other duty assigned by the Head Caretaker.



**5. 3. 22. VETERINARY COMPOUNDER:**

To arrange requisition for handling and operating medical cases. To assist Veterinary doctor in day to day treatment/dressings and management of surgical and gynecological cases. To maintain stock of medicine and equipments in Zoo hospital. To maintain feeding records of in-door patients. Collection of specimens during Necropsy examination and their preparation for microbiological and pathological laboratory examinations. Processing of relevant samples for detail lab test/examinations. Maintenance of museum specimen and up-keep of their history records. Maintenance of lab equipments/instruments in order and maintaining of their log books. To assist the Veterinary Officer in taking x-ray radiographs of sick animals. Develop x-ray films and after results are recorded to preserve them properly along with the results. To requisition x-ray films, chemicals, cassettes and maintenance of their stock properly. To maintain radiographic lab and x-ray machine, endoscope etc in working condition.



## CHAPTER – 6

### 6. 1. **DISASTER MANAGEMENT:**

The area of the proposed zoo is very large. During summer the dried undergrowth and grass are prone to fire. The area is of open scrub type. Precautionary measures such as fire tracing works can be taken up during the pre summer season. Fire extinguishing equipments are to be installed at strategic points in the zoo.

There is no full proof management system that will prevent destruction and causality in natural calamity; however emergency preparedness shall aid successful control and mitigation. Though the occurrence of such natural and manmade disasters is certain, they are infrequent, and the zoo has to cope with it. To deal with it an Emergency Preparedness Hand Book shall be prepared which will specify the following points:

1. Formation of emergency team with chain of command in the team.
2. Each member and employ should know exactly what his/her role is during a disaster, whom to report and work with.
3. List of the possibilities of disasters and its emergency preparedness in operational and orderly planned manner.
4. List of personal needs like water, food, first aid, lantern, battery, torches stoves, rain/ winter cloth etc. will also be provided in the hand book.

## **6. 2. POSSIBILITIES OF DISASTERS:**

### **6. 2. 1. FIRE:**

Since the area is deciduous forests and the climate is very hot during summer the area is highly prone to fire incidents .To prevent fire incidents and to deal with the possible fire incidents following strategies are proposed to be adopted .

1. Creation of awareness among the adjacent villagers and the visitors by conducting education programs and by putting proper signage's at prominent places inside the zoo
2. Construction of watch towers at elevated places and by intensive patrolling along with network of communication systems.
3. Fire lines will be formed wherever necessary.
4. Fire extinguishing equipments will be provided.
5. Staff will be trained to use fire extinguishing equipments.
6. Smoking will be strictly banned inside the zoo premises.

### **6. 2. 2. FLOOD:**

Chances of floods is very remote .In case of strikes, people can be hired from the nearby town, Hospet to tackle the situation. In case of non cooperation from the food supplying contractor , food for animals can be procured from the nearby town ,Hospet In case of flood occurrence ,Cleaning and sanitation will be undertaken .food items will be stored well above the ground level. Contamination of drinking water will be prevented .Existing fire services, police services will be utilized when necessity arises

### **6. 2. 3. BREAKDOWN OF LAW AND ORDER:**

The management of Zoo may be put under the Essential Service Maintenance Act which will immensely help the zoo in smooth functioning at the time of such law and order breakdown. However preparedness is required in case of law and order breakdown due to external aggression or any other

major situation. The preparedness will mostly concerned with stocking of food item, medicine, and other daily required materials for animal as well as for staff.

**6. 2. 4. EVACUATION OF THE VISITORS:**

The zoo should have a detailed written protocol for evacuating visitors in hour of every crisis. There should be provision of emergency exhibits and a public address system to communicate to the visitors the routes to be followed to get out of the zoo in the event of any disaster/ crisis. Zoo guides and security guards should ensure that visitors do not panic and get out of the zoo safely through the routes earmarked for the purpose.

**6. 2. 5. AVAILABILITY OF PHONE NOS. TO BE CONTACTED AT THE TIME OF DISASTER:**

The number of zoo Director, police control room, fire brigade station and the nearest police station should be notified at important points i.e. Security Room, Administrative Block, Hospital, Stores and the animal enclosures.

**6. 2. 6. EQUIPMENTS REQUIRED FOR DEALING WITH THE DISASTER:**

1. Alarm system
2. Public address system
3. Radio communication
4. Rubber boots
5. Helmets
6. Shovels
7. Pick Axe
8. Welding cutting machine and gas cutter
9. Portable chain saw
10. Portable generator
11. Portable pumping set

12. Ropes & nets
13. Portable cages
14. Construction material
15. Chain link, angles, clamps, iron rods and cement
16. Tractor-trolley and portable earth removing equipment
17. Fire-proof dress and goggles
18. Wooden planks & bamboos

## CHAPTER – 7

### 7. 1. CONTINGENCY PLAN:

Zoo should be well equipped and in a state of total preparedness to tackle with any contingency that may arise in the zoo. There should be detailed written plan of operation for dealing with each contingency with the responsibility each zoo personnel clearly spelt out. Shortage of resources should be no excuse for any laxity in implementation of the plan. Absence of particular officer should not lead to any delay in tackling the situation. There should always be alternate decision taking authority in absence of the officer designated for decision making. The contingencies that may arise in the zoo from time to time are briefly summarized below:

### 7. 2. ANIMAL RESCUED FROM WILD:

Whenever any wild animal strays from the wild and enters human habitation or any wild animal becomes a nuisance by attacking human beings and cattle, invariably the help of the Zoological Park is sought in rescuing such animal.

The usual animals, which stray from the wild and enter human habitation, are Panther, Bears, Hyenas, Langur and Monkeys. Among reptiles sometimes Crocodiles need to be rescued... Among Herbivores, Black bucks have been posing problems in the nearby areas .which can be rehabilitated in the proposed zoo.

For capturing animals like, Panthers and Bears, trap cages are needed and considering the demand in the state, at least four trap cages should be ready at any point of time. This number is important, because trapping sometimes becomes time consuming, which may take days together. But sometimes, monkeys are captured by the local bodies like municipalities and Gram Panchayats and for the sake of

custody; the animals are given to Zoo. For this purpose, adequate housing facilities in the form of cages need to be provided. In some cases, crocodiles need to be rescued.

For rescuing the animals, the speed with which the zoo management respondents is important. For the purpose of rescuing animals, a Mahindra Pickup Van, a light commercial vehicle is required. This is because bigger cages cannot be transported in Pickup Van.

### **7. 3. ESCAPE OF ANIMALS FROM ENCLOSURE:**

In the event of escape of animal from enclosure, the same trap cages, which are meant for rescuing animals from the wild, shall be used. An alarm system will be provided to alert security and public address system will warn the public and staffs to take shelter from the stray animal. In order to react fast at any point of time, tranquilizing guns, blow pipes, pistols in good condition should be present. The chemicals and darts are ready at any time. First alarm system has to be in place to alert security personnel and to evacuate or cordon off visitors from the scene of incident.

In case of any animal attacking the visitors, the animal need to be shot with permission of Chief Wildlife Warden and for this purpose 303 Rifle is required with appropriate ammunition. Communication system should be effective in communicating the incident fast either with wireless or any other system.

The equipments required to capture the animal are:

1. Tranquilizing gun
2. Blow dart
3. Jab sticks
4. Squeeze cage
5. Cages of different sizes
6. Transport crates
7. Nets and ropes
8. Plastic Face Mask

9. Poles, ropes
10. Gunny bags and plastic bags

#### **7. 4. MONKEY AND DOG MENACE:**

##### **7. 4. 1. MONKEY MENACE:**

The best safeguard to eliminate monkey menace is feed all the zoo animals in feeding cells/ kraals covered from the top and putting the leftover food by animals in the bins with latch and lock. The eating houses and restaurant should also put the garbage/ half eaten food in the bins covered from the top.

1. The visitor should be allowed to take out eatables outside the restaurant/ cafeteria.
2. Visitors should not be allowed to take any food item in the zoo.
3. Monkey population, if tending menacing dimensions, the monkeys should be captured vasectomised/ tubectomised and treated from tuberculosis. Once these are infection free could be released in the adjoining forests/ zoo.

##### **7. 4. 2. DOG MENACE:**

Proper maintenance of the boundary fence and immediate repair of breach if any, is an effective measure for controlling the dog menace.

1. Security staff at gate duty should exercise strict vigilance to prevent dogs from entering the zoo.
2. Dogs if any enter the zoo should be captured on priority basis and handed over to the NGOs/ Municipal Corporation.
3. Any dog which is sickly and poses that of infection of zoo animals should be eliminated.

##### **7. 5. FEED SUPPLY DURING STRIKES:**

As already discussed on disaster management, all provisions which will be sufficient for one month will be procured and stored in the feed store. Perishable items like fruits, vegetable will be procured departmentally without depending on the contractor. The most crucial item of feed in the case of Zoo Park is beef, chicken and eggs. Deep freeze facilities are erected, where beef, chicken and eggs can be

stored for two or three days. In case of supply not being restored within two or three days, all this can be arranged departmentally with the involvement of uniformed staff.

#### **7. 6. SNAKE BITE:**

Zoological Park is home to many local reptiles like cobra, common krait, Russel vipers etc., the animal keepers will have to handle poisonous snakes. There are plenty of chances of visitors and animal keepers getting snake bite. In order to prevent any such casualties on account of snake bites Anti venom serum stock has to be stored in the zoo hospital for any eventuality. First aid kit also needs to be kept at all import points in the zoo park.

#### **7. 7. INJURY TO VISITORS:**

The zoo Park is expected to attract more visitors every year. During summer holidays and other festival holidays, the general visitation is expected to be more than thousand. During which time supervision of the staff may suffer. In order to avoid visitors getting injured

1. Putting signboards on every enclosure to keep away from the enclosures.
2. Providing effective standoff barriers.
3. Keeping first aid kit at zoo hospital for attending and providing the patient preliminary care.
4. Transport the patient to nearest hospital if so required.

#### **7. 8. VISITOR FALLING INSIDE THE ANIMAL ENCLOSURE:**

If the visitors accidentally jumps into the enclosures immediately the keeper shall attempt to take the animals in the feeding cells by putting food there. If the trick does not work, the animal would be chemically immobilized. In the mean while, attempt would be made to keep the animal away from the visitor by shouting, poking with bamboo bale and throwing stones. Telescopic type ladders made of aluminum should be kept ready the visitors fell inside the moated enclosure. The animal Curator would be physically present at the site during rescue operation.

To prevent visitor falling into moats, the railing and live hedge to set up around each moat has to be strengthened.



**7. 9. FIGHTING AMONGST ANIMALS:**

Effort would be made to drive back the fighting animals to the feeding cells. If that does not work, chemical immobilization can be resorted to. Fighting amongst some species is part of breeding behaviour. Zoo personnel would take care that they do not disrupt the breeding activity of the animals in their enthusiasm to stop fighting between the animals. Possibilities of infighting amongst animals can be minimized through gradual and planned introduction of a new animal in a group and only keeping such animals in a group which compatible.

In species like Barking deer and Primates, killing of sub-adult reaching adulthood by the dominant male are quite high. Such sub adults would be removed from the group and kept in kraals.

**7. 10. EPIDEMICS:**

Zoo shall ensure that all the animals in the zoo and the animals in the adjoining villages are provided prophylactic treatment including vaccination as per advice of the zoo veterinarian. The diseases requiring vaccination are:

**Ungulates:**

1. Anthrax
2. Foot and mouth disease
3. Hemorrhagic Septicimia
4. Trypanosomiasis
5. Babesiosis

**Carnivores:**

1. Feline Panleucopenia
2. Canine distemper
3. Feline calicivirus

As soon as some animal shows symptoms of a infectious disease, it should be removed immediately from the group and kept in isolation ward for treatment. En-mass vaccination in panic herding the animal at a time should invariably be avoided. In case of doubt that some animal has died of anthrax, no postmortem should be done and the carcass buried intact, to safeguard against other animals being infected by anthrax.

**7. 11. BREAK UP OF POWER SUPPLY :**

Zoo should keep back up generator at the Administrative Block, zoo hospital and the water pumping house to meet the crisis created by break up of power supply.

## CHAPTER – 8

### 8. 1. CAPACITY BUILDING:

Regular trainings to all the staff will be conducted for keeping the staff and officers fit and better equipped in Zoo Management. Significant improvements and innovations are taking place in Zoo Management elsewhere in India and abroad. There is need to equip the staff with these trends. With this end in view, the following types of trainings are proposed at the Zoological Park.

### 8. 2. IN HOUSE TRAINING:

It is proposed to organize training sessions with such people for the benefit of youngsters. A group of youngsters is to be attached to such senior staff for some time, so that all the nuances of the job can be learnt “on job”. Also, working in groups fosters team spirit, which is the modus operandi of modern corporate work.

### 8. 3. TO ENCOURAGE SPECIALISATIONS:

If staff is assigned jobs which they like and love, then the results can be significant. Therefore, it is desirable to elicit the preferences of each person, and allot jobs accordingly. This helps in specialisation in the field.

### 8. 4. INTERACTION WITH RETIRED STAFF:

Several of the present staff is children of retired / deceased employees, taken on compassionate grounds. It is indeed a sort of family tradition. To make such traditions effective, it is also desirable to

conduct interactive sessions of select staff with notable retired staff in Animal Keeping, Gardening, Security, Workshop and Veterinary care.

**8. 5. FORMATION OF QUALITY CIRCLES:**

With a view to assess each situation at ground level and suggest cost effective reliefs, there is need to form Quality Circles in each section via: Animal Keeping, Gardening, Security, Workshop, Veterinary care. These circles shall discuss emerging problems, and suggest solutions. This will enable participation approach and ingenious in management.

**8. 6. ANNUAL REWARDS:**

With a view to recognize the services of industrious staff, it is proposed to institute awards in each of the fields via:

- 1) Memorial Award: Animal keeping
- 2) Memorial Award: Gardening
- 3) Chief Wildlife Warden Award: Security

Monthly list of best staff in each of the above categories will be displayed. At the end of the year, Rewards/ Awards would be given.

**8. 7. RECREATION / RELAXATION FOR STAFFS:**

To enable the staff to work in groups, and coordinate with each other, team games play a great role. Therefore, it is proposed to set up an Amenities Centre, with facilities for indoor and outdoor games. Also, it is proposed to organize “Cultural evening” or “talent shows” for encouraging cultural talents and fine arts in them. In order to make them stay back at their places of work, during lunch breaks, it is all necessary to provide facilities for dining nearer to their places of duty, and relax their itself.

**8. 8. NATIONAL LEVEL TRAININGS:**

The supervisory cadre like curator, Asst. conservator of forests, range forest officers, Foresters, Animal Keepers etc., needs to be trained in wildlife management and animal handling.

Deputing the supervisory staff to different training institutes for workshops and seminars is proposed. This will keep the supervisory staff in good stead as it will help them in keeping touch with latest developments on the wildlife front.

Special training programs have to be organized for supervisory cadre like head animal keepers and park supervisors in the zoo park itself or other zoological parks of the state.

Some times a tour of other zoological parks outside state by Head animal keepers will go a long way in improving their outlook, as they will be picking up some good practices adopted in other Zoo Parks.

**8. 9. TRAINING ABROAD:**

Deputation of supervisory staff to outside the country will equip them with latest animal handling techniques. Trainings in abroad will be scheduled as felt necessary.

## CHAPTER – 9

### 9. 1. E – GOVERNANCE:

The E-governance is a potent tool for bringing efficiency, transparency and reliability in the zoo management. The Director, Asst. Director, Curator, Education officer and the Research and Monitoring Officer would have computers, which will be networked with a LAN and the data in the entire computer would be accessible to every officer. Important data on management of the zoo, the inventory of animals, details of housing facility, feeding schedule, births and deaths of animals, causes of death would be made accessible on the website of the zoo. Scientific or behaviour and biology of important animal species and their conservation status would also be made available on the website. Visitors should have the facility of booking their ticket at home.

All the transactions ,ticket issuing ,.administrations ,web site of the zoological park , stores section, veterinary hospital , will be under the e-governance by giving contract to an efficient software company .

All the zoo workers could be given smart card through which time of their arrival and departure from the zoo could be entered in the computer.









4	Parking & Garden				4000				25
5	Administrative Building				200		2		60
6	Veterinary Hospital Building				400		1		50
7	Staff Quarters				160		4		100
8	Store cum Kitchen				200		1		40
9	Toilets				75		4		16
10	Watch tower						4		7
11	Postmortem				30		1		8
12	Visitors road	3167			11876.25				94.65
13	Service road	5070			19012.5				213.83
14	Approach road	610			2287.5				13.25
15	Zoo road	1500			5625				47.15
16	Safari road	4500			16875				141.3
17	Culverts						16		10
18	Enclosures area				17250				700.6
19	Safari area				700000				552.75
20	Entrance / Kiosks / Logo								50
21	Sanitation								120
22	Water supply & digging of bore wells						4		250
23	Vehicles								35
24	Plantations								75
25	Nalla Bunds / Check								50

	dams					
26	Miscellaneous					6
27	Electrical works & Solar lights					150
28	Procurement of animals					150
29	Rescue centre & burial yard			209580		24
	<b>Total</b>					<b>3431.53</b>

**10. 2. 3. DETAILS OF THE AREA WISE EXPENDITURE OF ENCLOSURES**

Sl no	Name of the animal	Area allotted in the zoo In sq mts	Expenditure In lakhs Rs
	<b>Safari</b>		
1	Herbivores safari	300000	154.50
2	Tiger safari	200000	203.75
3	Sloth beer safari	200000	194.50
	<b>TOTAL</b>	<b>700000</b>	<b>552.75</b>
	<b>Zoo</b>		
5	Aquatic birds	4000	263.84
6	Pheasants	750	24.20
7	Peacocks	1000	30.27
8	Parrots & Parakeets	750	24.20
9	Bonnet macaque	1000	26.13
10	Stump tailed macaque	1000	26.13

11	Lion tailed macaque	750		20.09
12	Common langur	1000		26.13
13	Fox	700		22.67
14	Jackal	700		22.67
15	Wolf	800		26.77
16	Hyena	800		26.77
17	Leopard	1000		68.35
18	Leopard cat	500		26.39
19	Jungle cat	500		26.39
20	Marsh crocodile	1000		19.80
21	Gangetic gaviel	1000		19.80
	<b>TOTAL</b>	<b>17250</b>		<b>700.60</b>
	<b>GRAND TOTAL</b>	<b>717250</b>		<b>1253.35</b>

### 10. 3. MAINTENANCE OF ZOO:

The details of financial requirement for maintenance for different items are given below:

#### DETAILS OF ITEM WISE ANNUAL MAINTENANCE COST.

Rupees in Lakhs.

Sl.No	Item of Work	Average Annual Requirement
1	Salaries & allowance to staff	102
2	Feed & Fodder supplies, maintenance of Fodder Plot, Kitchen, Feed store etc.	75
3	Maintenance of Animal Enclosures, seasonal arrangements etc.	10
4	Maintenance of visitors facilities, roads/ paths,	10

	landscapes etc.	
5	Maintenance of Water pipelines, pumps, sumps, cost of water charges etc.	10
6	Maintenance of Drains, filters etc.	3
7	Maintenance of Electric lines, consumption charges etc.	20
8	Maintenance of Zoo Vehicles	10
9	Maintenance of Hospital Facilities, Medicines etc.	12
10	Maintenance of buildings quarters etc.	12
11	Maintenance of main gate complex service charges etc.	10
12	Maintenance of service stores, workshop etc.	10
13	Maintenance of Concertina Coil, Solar fencing, CCTV, Security Services etc.	10
14	Procurements/Transfer of Animals	20
15.	H.R. Development	10
16	Research services, including services of Biologists	4
17	Repairs to Signages, Brochures, Annual Reports	7
18	Maintenance of Zoo office, including miscellaneous contract services	15
19	Training Physical and Chemical Immobilisation of Animals.	5
20	Eradication of weeds and climbers in the Zoo	10
	<b>Total</b>	<b>365</b>

**10. 4. EXPENDITURE FOR THE STAFF:**

The annual financial requirement for the salaries of the staff proposed is given below .This will be met by the state government.

Sl no	Post proposed	Proposed strength	Annual salary in lakhs Rs
1	E.D. / Deputy conservator of forests	1	7.00
2	Assistant conservator of forests	1	4.50
3	Veterinary doctor	1	4.50
4	Range forest officer	1	3.50
5	Forester	2	4.00
6	Veterinary assistant	1	2.00
7	Forest guards	3	4.25
8	Animal keeper	20	15.50
9	Driver	6	7.0
10	Technical staff (blacksmith, carpenter)	2	3.00
11	Watchman	4	5.50
12	Clerk	3	5.00
13	Peon	3	4.25
14	Computer operators	2	3.00
15	Junior engineer	1	2.50
16	Education officer	1	3.00
17	Research assistant	1	3.00

18	Gardener	6	8.25
19	Sweepers	8	9.00
20	Veterinary compounder	2	3.00
	<b>Total</b>	<b>69</b>	<b>101.75</b>

**10. 5. FEED & FODDER:**

Animals housed in the zoo will be provided food and fodder as per the prescriptions of the Zoo authority of Karnataka. The quantity and the cost of feed and fodder are based on the guidelines issued by the ZAK which is given below. The animals and birds will be provided feed and fodder for 7 days in a week.

<b>COST OF FEED AND FODDER FOR THE ANIMALS</b>						
SI no	Name of the animal	No. of animals to be kept	Diet kg/day/animal	Diet /day for all the animals	Kind of diet	Cost/day In Rs
1	Lion	4	12	48	Buffalo meat	1920
			1.3	5.2	chicken	
2	Tiger	4	12	48	Buffalo meat	1920
			1.3	5.2	chicken	
3	White tiger	4	12	48	Buffalo meat	1920
			1.3	5.2	Chicken	
4	Panther	4	4	16	Buffalo meat	1920
5	Leopard cat	4	4	16	Buffalo meat & liver	680

6	Jungle cat	4	0.1	0.4	Beef & other items	60
7	Small Indian civet	4	0.1	0.4	Chicken & Other items	80
8	Palm civet	4	0.1	0.4	Chicken & Other items	80
9	Sloth bear	4	0.2	0.8	Bread & Other items	360
10	Himalayan black bear	4	0.3	0.9	Bread & Other items	440
11	Wolf	4	0.5	2	Buffalo meat & other items	600
12	Jackal	4	0.5	2	Buffalo meat & Other items	280
13	Fox	4	0.5	2	Buffalo meat & Other items	280
14	Hyena	4	3	12	Buffalo meat & other items	600
15	Otter	4	2	8	Fish & other items	480
16	Jaguar	4	12	48	Buffalo meat	1920



57	Water tortoise	4	0.05	0.2	Greens, carrot	28
58	Indian peafowl	4	LS	LS	Bread, Milk & other items	120
59	Love bird	4	LS	LS	Veg green & others	80
60	Ducks	4	LS	LS	Veg green & others	48
61	Plum headed parakeet	4	LS	LS	Bread&others	100
62	Rock pigeon	4	LS	LS	Bread&others	100
63	Grey heron	4	LS	LS	Fish	16
64	Emus	4	LS	LS	Fish	80
65	Green pheasant	4	LS	LS	Maize, Jola & others	140
66	Lady Amherst pheasant	4	LS	LS	Maize, Jola & others	140
67	Kalij pheasant	4	LS	LS	Maize, Jola	140
68	Pelican grey	4	LS	LS	Maize, Jola & others	140
69	Great white Pelican	4	LS	LS	Maize, Jola & othersw	140
70	Flamingo	4	LS	LS	Maize, Jola & others	140
71	Java sparrow	4	LS	LS	Bread, Banana & others	100
72	Peafowl white	4	LS	LS	Bread, Banana & others	100
73	Swan black	4	LS	LS	Veg green	48
74	Rose ringed Parakeet	4	LS	LS	Bread, Banana & others	100
75	Duck shoveler	4	LS	LS	Bread, Banana & others	100

76	Parakeet alexandrine	4	LS	LS	Bread,Banana & others	100
77	Large Egret	4	LS	LS	Bread,Banana& others	100
					<b>TOTAL</b>	<b>33260</b>

**10. 6. LIST OF ITEMS OF MAINTENANCE:**

The items which are necessary for the maintenance of the zoo are given below .The financial requirement will be met by the state government .A reserve fund will be kept in the Zoo development committee by receiving contributions from the BATF and publics so that it will be used in emergency cases .

SI.No.	Particulars
1	Salaries & allowance to staff
2	Feed & Fodder supplies, maintenance of Fodder Plot, Kitchen, Feed store etc.
3	Maintenance of Animal Enclosures, seasonal arrangements etc.
4	Maintenance of visitors facilities, roads/ paths, landscapes etc.
5	Maintenance of Water pipelines, pumps, sumps, cost of water charges etc.
6	Maintenance of Drains, filters etc.
7	Maintenance of Electric lines, consumption charges etc.
8	Maintenance of Zoo Vehicles
9	Maintenance of Hospital Facilities, Medicines etc.
10	Maintenance of buildings quarters etc.
11	Maintenance of main gate complex service charges etc.
12	Maintenance of service stores, workshop etc.

13	Maintenance of Concertina Coil, Solar fencing, CCTV, Security Services etc.
14	Procurements/Transfer of Animals
15	Conservation Education, including guide facilities.
16	H.R. Development
17	Research services, including services of Biologists
18	Repairs to Signage's, Brochures, Annual Reports
19	Maintenance of Zoo office, including miscellaneous contract services
20	Training Physical and Chemical Immobilization of Animals.
21	Eradication of weeds and climbers in the Zoo

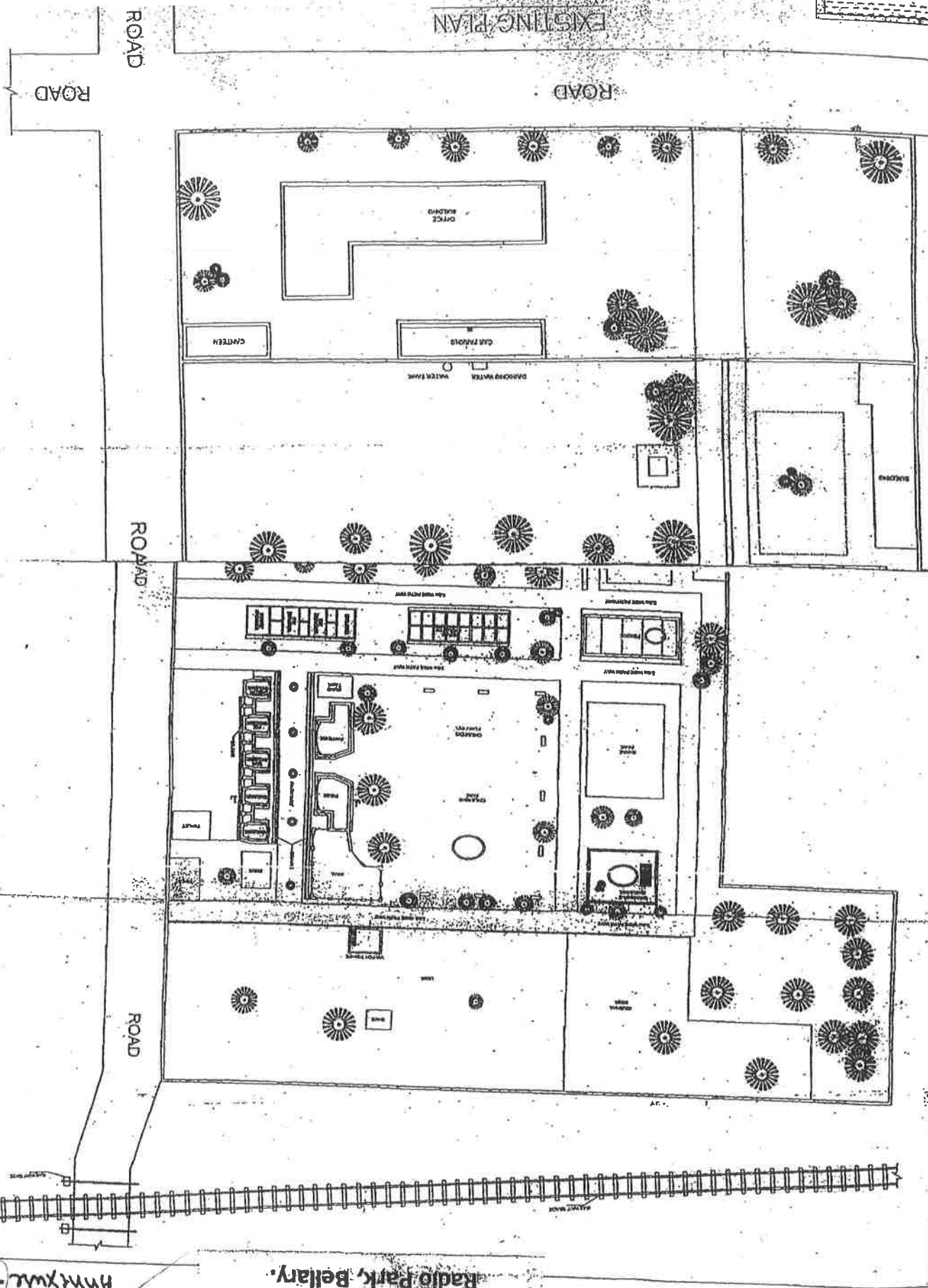
**10. 7. REVENUE EXPECTED:**

The revenue for the zoo is obtained by way collection from the following items

SI.No	Particulars	Amount in lakhs Rs.
1	Entry fees from visitors ,about 3.0 lakhs visitors annually	150.00
2	Vehicles parking collections	15.00
3	Animal adoption collections	10.00
4	Rent collections from restaurants and other stalls	5.00
5	Donations from publics , other agencies	25.00
	<b>TOTAL</b>	<b>205.00</b>

ANNEXURE -1

EXISTING PLAN



Children's Park cum Mini Zoo,  
Radio Park, Bellary.

Annexure -1

11-03 (VEU) 17127  
15:5511-03 (VEU) 17127  
TEL:

0001 01 00010

P: 02

(5)

CM/5544/601/2001  
29/9श्री. आर. बाबु  
श्री. आर. बाबु  
T. R. BAALUमंत्री  
पर्यावरण एवं वन  
भारत सरकार  
नई दिल्ली-110003MINISTER  
ENVIRONMENT & FORESTS  
GOVERNMENT OF INDIA  
NEW DELHI-11000325<sup>th</sup> September, 2001

D. O. No. 25-1/2000-CZA

Dear Thiru. S.M. Krishna Ji, Vanakkam.

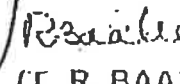
The Central Zoo Authority is quite concerned about the state of zoos in Karnataka. You might be aware that almost every town in your State has a mini zoo. Most of the mini zoos have inadequate land area and cramped cages for housing the animals. The Central Zoo Authority has been requesting the State Government to close down such zoos. The list of the zoos is annexed. You may kindly issue necessary direction in this regard.

I would like to inform you that while on the one hand, the Central Government wants to close cramped and ill planned zoos, it is providing substantial financial support for upgrading such zoos, which have potential to improve. Recently, we have sanctioned Rs.166 lakhs for modernization of Lion and Tiger Safari, Shimoga. Government of India is also keen that Bellary which is one of the major cities should have a modern zoo. The area of the present zoo is only 1.2 ha. and the animals like Tigers, Panthers, Deer Species etc. are housed in dingy cages with little space for movement of these wild animals. Central Zoo Authority has been requesting Karnataka to either go for creation of a modern zoo at an alternative site or close down the existing zoo and transfer the animals to the zoos at Bannerghatta, Shimoga and Mysore. However, no action has been taken on the directions of the Central Zoo Authority.

You may like to direct the authorities concerned to take necessary action on the lines suggested above and rehabilitate the animals in recognized zoos and rescue centres in your State.

With regards,

Yours sincerely,

  
(T. R. BAALU)
Thiru. S.M. Krishna,  
Hon'ble Chief Minister of Karnataka,  
Bangalore.

End: As above

PROCEEDINGS OF THE BOARD OF REVENUE  
(LAND REVENUE).

Read the following Government Order, dated 6th December 1893, No. 1068, Revenue:—

Read the Proceedings of the Board of Revenue (Land Revenue), dated 18th November 1893, Forest No. 789.

Submitting to Government, for approval and publication, the draft notification under section 4 of the Forest Act for the proposed constitution of the Bilikaldu West Block in the Hobbel Taluk, Bellary district, as a reserved forest.

Order dated 6th December 1893, No. 1068, Revenue.

Forest No. 382.

The draft notification, as amended by the Board of Revenue, is approved and will be published in the Fort St. George and Bellary District Gazettes.

(True Extract.)

(Signed) G. A. GALTON,  
Secretary to Government.

By the Commissioners of Land Revenue, with map.  
Superintendent, Government Press, with notification.

NOTIFICATION.

His Excellency the Governor in Council is pleased to notify, under the provisions of section 4 of the Forest Act (V. of 1882), that it is proposed to constitute the block of land, the boundaries of which are set forth in the schedule appended to this notification, a "reserved forest" under the provisions of the said Act.

SCHEDULE.

Name of Taluk	Name of forest.	Number of block.	Boundaries.
Hobbel	Bilikaldu, West.	178	<p>North.—Starting from the second village boundary stone on the southern side of Kariyapur, the line runs east-north-east along the southern boundary of the said village to the south-east corner of No. 1 of the same village; from that point a straight line north-east across No. 1310 of Kaimalapur to the south-west corner of No. 1311; then along the southern side of that number and No. 1297 to the south-east corner of the latter; from that point a straight line east-south-east to the south-west corner of No. 1299 to a point on the latter side which is fourteen and a half chains from its south-west corner; thence a straight line north-east for about three and a half chains to the southernmost corner of No. 1297; then along the southern side of that number and Nos. 1297, 1298 and 1299 to the south-west corner of No. 1299; from that point a straight line for about twenty-two chains in a south-easterly direction to meet the railway line towards Kaimalapur cart-track (all these numbers are of Kaimalapur).</p> <p>South.—From the last-mentioned point a straight line west to the north-east corner of No. 5; thence the north and south-western sides of No. 5 to its north-west corner; thence a straight line in a westerly direction for</p>

'TRUE COPY'

*Ramachandru*  
R. M. S.

Deputy Conservator of Forests  
Working Plans and Forest Surveys



BOARD OF REVENUE (LAND REVENUE), 16TH JANUARY 1894, FOREST NO. 83.

about eleven chains to the second bending from the north-west corner of No. 4; then another straight line west-north-west to the northernmost corner of No. 137 (all the above numbers are of Pappaykambhalli); from that point another straight line north-west for about fifteen chains to the north-east corner of No. 3 of Ingallgi; then along the northern, north-western and western sides of No. 3 to the north-east corner of No. 4; then along the northern side of that number to its north-west corner; thence a straight line south-west to the second bending on the western side of No. 4 from its north-west corner (all these numbers are of Ingallgi); from that point a straight line west-south-west to the village boundary stone at the north-east corner of No. 27 of Vaddrahalli; then along the northern boundary of Vaddrahalli village to the second village boundary stone on the northern side of No. 68 of Vaddrahalli counting from its north-east corner; from that point a straight line west-south-west to the village boundary stone on the northern side of No. 63 of the same village; thence the northern side of that number and No. 64 to the north-west corner of the latter (these numbers belong to Vaddrahalli); then along the northern side of No. 184 of Ingallgi to its north-west corner; thence a straight line in a westerly direction to the north-east corner of No. 180.

West:—From the last-named point a straight line north-west to the north-east corner of No. 171; then along the eastern side of No. 169; southern and eastern sides of No. 168 to its north-east corner; thence a straight line north-north-east to the south-east corner of No. 76; from that point another straight line in the same direction to the northernmost corner of No. 71; then along the northern sides of Nos. 72, 80 and 81 to the north-east corner of No. 83; thence a straight line due north to the north-west corner of No. 60; from that point another straight line west-south-west to a point on the northern side of No. 58, which is about seven chains east of its north-west corner; then along its northern side to its north-west corner; from that point a straight line north-north-west to the north-east corner of No. 49; thence another in the same direction to the north-east corner of No. 41; thence a third also in the same direction to the north-east corner of No. 43; from that point a straight line north-west to the north-east corner of No. 27; then along its northern side to its north-west corner; from that point a straight line due west to the starting point.

2. His Excellency the Governor in Council is further pleased, under the provisions of section 4 (c) of the said Act, to appoint Mr. E. A. Smith to be the Forest Settlement officer who shall inquire into and determine the existence, nature and extent of any rights claimed by, or alleged to exist in favour of any person or over any land comprised within such limits or to any forest produce of such land, and deal with the same as provided in chapter II of the said Act; and the District Forest officer, Bellary, for the time being, to attend on behalf of Government during the inquiry.

3. His Excellency the Governor in Council is further pleased, under the authority vested in him by section 14 of the said Act, to appoint the Collector of Bellary, for the time being, to be the officer of the Revenue Department who shall hear appeals from orders of the Forest Settlement officer passed under sections 11, 12 and 13 of the said Act.

Resolved, that the order of the Board of Revenue, dated 16th January, 1894, Forest No. 83, be communicated to the Collector of Bellary and the Conservator of Forests, Northern Circle.

(A true Copy and Extract.)  
 (Signed) W. S. MEYER,  
 Secretary.

To the Collector of Bellary, with a map.  
 To the Conservator of Forests, Northern Circle.

TRUE COPY  
 Ramachandra, I.F.S.  
 Deputy Conservator of Forests  
 Working in the Forest Surveyors  
 Fort, BELLARY 583 102.

Camp : Hospet.

Dt : 07.12.2002

Jm,

PATTANAİK, IFS (Retd.)

Formerly Addl. Principal

Chief Conservator of Forests - Orissa,  
81, Fisheries Lane, Buddeshwari Colony,  
Bhubaneswar - 751 006 (Orissa).

Dear Sri Sahai,

As requested, I visited the proposed site for shifting of the present Bellary Zoo to Blikalu West Reserve Forest in Hospet Range of Bellary Division which is situated about 2 Kms from Kamalapur town, about 4 Kms from Hampi, 14 Kms from Hospet and 56 Kms from Bellary.

I had earlier visited the site located at Allpur which is 6 Kms from Bellary on Bellary-Hospet road. The present site which is part of Blikalu West reserve forest (total area of 1200 ha.) appears to be more suitable compared to the previous site due to the following reasons :

1. The soil is more stable in the new site, as the site near Bellary has black cotton soil.
2. This is close to the Tungabhadra canal system and has good water availability. Besides this, ground water survey has indicated that the ground water availability is quite good.
3. The site is undulating and interspersed with hillocks and valleys, these features shall make the zoo interesting.
4. The floristic diversity of the area is far better than the previous site and the plantation taken up earlier has done well despite low rainfall.
5. Being in the close proximity of Vijayanagar ruins of Hampi, this will be an excellent addition to the tourist circuit as this can provide nature education to the visiting public.
6. With proper planning this can be a good Zoological park housing mainly the animals of the region provided the Zoo Authority of Karnataka decides to shift the Zoo to Hospet.
7. A nursery and a field unit of Karnataka Wild Life work is already operational close to the site, which will be an added advantage. An area of about 60 Ha. on the Eastern part of the forest block including a nice valley and gentle slope shall be quite suitable for the proposed Zoo.

Thanking you,

Yours sincerely,

(S.K.) PATTANAİK

To,  
SR. R.M.N. SAHAI  
Member Secretary,  
Zoo Authority of Karnataka,  
Mysore Zoo Campus,  
MYSORE - 570 010.

Copy forwarded to the Member Secretary, Central Zone Authority, Annex-VI, Bikaner House, Shahjahan Road, New Delhi for information.





Annexure - 5

5



GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT & FORESTS  
**Central Zoo Authority**

हरियाली।  
खुशहाली।।

F. No. 19-80/93-CZA(104)Vol. II(M) 188

DATE: 18.12.2012

To

The Addl. Principal Chief Conservator of Forests & Member Secretary  
Zoo Authority of Karnataka,  
Sri Chamarajendra Zoological Gardens Premises,  
Indira Nagar, Mysore - 570 010 (Karnataka).

**Sub:- Master (layout) Plan of the Relocation of Bellary Zoo to Atal Bihari  
Vijapayee Zoological Park in Bilikal Reserve Forests, Kamalapur near  
Hospet, Bellary, Karnataka.**

**Ref:- Your office letter No. MSY/55/BLY/2001/V2 dated 05.11.2012.**

Sir,

Reference is invited to the above cited subject.

Submitted Master (layout) Plan of the Relocation of Bellary Zoo to Atal Bihari Vijapayee Zoological Park in Bilikal Reserve Forests, Kamalapur near Hospet, Bellary was scrutinized by the Expert Group on Zoo Designing of the Central Zoo Authority and recommended for approval. Accordingly, the Master (layout) Plan was placed before the 63<sup>rd</sup> Meeting of the Technical Committee of the Central Zoo Authority held on 5<sup>th</sup> December 2012. The committee members approved in principal the Master (layout) Plan of the Relocation of Bellary Zoo to Atal Bihari Vijapayee Zoological Park in Bilikal Reserve Forests, Kamalapur near Hospet, Bellary subject to changes in location of exhibits (copy enclosed) as recommended by the Expert Group on Zoo Designing of the Central Zoo Authority.

In order to send you a copy of the duly signed and approved Master (layout) Plan of the Relocation of Bellary Zoo to Atal Bihari Vijapayee Zoological Park in Bilikal Reserve Forests, Kamalapur near Hospet, Bellary, you are requested to submit the soft copy of the digitized Master (layout) Plan, showing contour details in any of the format i. e. AUTOCAD/ COREL DRAW/JPEG/TIFF/PDF files on a CD/DVD to this office, at the earliest.

In the meantime you should prepare master plan as per approved layout plan and submitted for scrutiny by members of the Expert Group on Zoo Designing at the earliest for final approval.

Yours faithfully,

(B. S. Bonal)  
Member Secretary

**Encl: as above.**

Copy for favour of information & necessary action to:-

1. The Chief Wildlife Warden, Government of Karnataka, Mangalore.
2. The Executive Director & Deputy Conservator of Forest, Atal Bihar Vijapayee Zoological Park, Kamalapur, Hospet Tq. Bellary District, Karnataka.

(B. S. Bonal)  
Member Secretary