

Statement No.15

Scheme of Compensatory Afforestation

Eco-restoration Plan for 39.00 hectare of Velavadar village (Shrubland and Grassland)
Ta.Bhavnagar, District-Bhavnagar, Blackbuck National Park, Velavadar, Bhavnagar.
Special designed model for Blackbuck National Park

1. Shrubland : 1000 nos. of *Salvadora sp.* and *Acacia Spp.* plantation along the boundary of 39.00 ha.
land at distance of 2.0 mtr. from plant to plant.
 2. Grassland : 37.00 ha. of grass like; *Dichanthium annulatum*, *Sporobolus madraspatensis*, *Chloris virgata*, etc. will be raised.
 3. Open patch : 02.00 ha. (in this patch, whatever natural growth is occurring should be left as it is but invasive species like *P. Juliflora* etc. should be removed regularly).
- Type : Water supply required for shrubland, grassland and open patch can be maintained on rain.
- Design & technique
1. Thorough survey of the area will be conducted.
 2. Flora & Fauna of the area will be noted down.
 3. Depending on the existing diversity / elevation / location; Blackbuck friendly floral species will be selected.
 4. Depending on the site, Blackbuck friendly vegetation will be kept in as it is condition.
- Species composition : *Salvadora sp.*, *Acacia nilotica sp.*
- Area development
1. Removal of unwanted species likd *P. juliflora* etc.
 2. Ploughing for grassland (max.15 cm. deep) will be done prior to monsoon
 3. For shrubland saplings should be planted in the pit (1 ft) after the first rainfall and if required fresh water should be supplied for a year to ensure the growth.
- Providing waterhole : One saucer-shaped waterhole having max depth of 1 ft. at the centre will be made with cement.
- Seed sowing : Seed sowing will be done at the distance of 50 cm. x 50 cm.
- Protection
1. Erection of chainlink fencing and wall along the outer side boundary will be done.
 2. Fence should be made in such a way that wild mammals can roam in, but, population and movements of feral dogs will be controlled.
- Planting : Seed sowing will be done at the distance of 50 cm. x 50 cm.
- Up keep of the area : Newly germinated invasive species of weeds will be removed in the first year and after that at certain interval. Regular water supply to the newly planted saplings and waterhole will be ensured.

Assistant Conservator of Forests
Black buck National Park, Velavadar,
Bhavnagar.

Date : __/02/2024
Place : Bhavnagar.

Annexure-19

Compensatory Afforestation Scheme for Non Forest area

Diversion of 38.8633 Ha of land for Tank Farm and Storage Associated Facility for Reliance Industries LTD. Hajira Manufacturing Division in Surat District of Gujarat.

Detailed scheme of Compensatory Afforestation for Non forest land area 39 ha. To be carried out in lieu of 38.87 ha. Of Reserve forest land to be diverted in Surat District.

1. Details of Non Forest land.

District	Taluka	Range	Village	Survey No.	Area(Ha)
Bhavnagar	Bhavnagar	Velavadar	Velavadar	152p/9-p1	39
Total					39

2. Description of Area.

Soil type	Murmy, Saline
Topography	Plain flat land
Slope	Flat land with gentle slope
Whether the area is bearing any root stock of Vegetation	Area covered with <i>prosopis juliflora</i> .

3. Name of Plantation Programme:-Compensatory Afforestation Scheme for Non Forest land Area.

Details of Year Wise Break-Up requirement of fund is as under.

Daily Wages-Rs.462			
Year	Area (Ha)	Rate/Ha.	Total Amount
0 Year 70%	1	326749	326749
1 st year	1	73916	73916
2 nd year	1	33103	33103
3 rd year	1	35338	35338
4 th year	1	63439	63439
5 th year	1	50014	50014
6 th year	1	38861	38861
7 th year	1	42133	42133
8 th year	1	45732	45732
9 th year	1	84333	84333
10 th year	1	54048	54048
Total	1	847665	847665
Supervision Charge 20 %	1	169533	169533
Total	1	1017198	1017198

Compensatory Afforestation will be done in 38.87 (39.00) ha. Area. The total afforestation cost will be Rs. 3,94,30,723/-

4. Schedule of Plantation Programme:-

(i)	The Compensatory Afforestation on degraded area would be started by Assistant Conservator of Forests, Blackbuck National Park, Velavadar as early as possible after the proposal is formally approved.
(ii)	Compensatory Afforestation will be done in 1 ha. Area. The total afforestation cost will be about Rs. 10,17,198/- has given an undertaking to pay the cost of Compensatory Afforestation as per the prevailing wages (including the price escalation and supervision charges).

5. Technical Details:-

Technical details of Compensatory Afforestation are as Follows:

Sr. No.	Details	Specifications		
a	General Details	The C.A. will be taken under Compensatory Afforestation for Non Forest land. The prevailing wage rate is 462.00 per day.		
b	Spacement	1000 nos. plants will be planted along the boundary of 38.87 ha. land at distance of 2.0 mt. from plant-to-plant.		
c	Species to be planted (total plants)	Species	Plants	Plants Height
		Salvadora spp.	700	50 cm
		Acacia Spp.	300	50 cm
		Total	1000	
d	Nursery Technique	Nine months old poly pot raised plants will be planted at the onset of monsoon.		
e	Site Preparation	The malformed rootstock present in the area will be cutback & the site will be cleaned in the month of Nov-Dec. Alignment & pit digging 45 x 45 x 45 cms. will be carried out in the month of Dec-Jan.		
f	Plantation Method	Poly pot raised plants will be planted during monsoon.		
g	Soil & Moisture Conservation Works	As per requirement		
h	Protection Trench	As per requirement		
i	Silvicultural Operations	1 st year three weeding soil working, Support watering will be provided if needed. 2 nd year two weeding soil working. 3 rd year one weeding soil working.		
j	Maintenance	It is proposed to maintain the Plantation up to ten years.		
k	Subsequent silvicultural Operation	Cleaning, thinning etc. (as per species specific requirement) will be carried out at the age as per prescribed in silvicultural operation.		
L	Proposed monitoring mechanism	(i) A plantation register is to be maintained. (ii) Monitoring is to be done as per the following norms. Forester – 100% RFO – 100% ACF – 20% DCF – 10%		

		<p>(iii) The results of survival etc. are maintained in the plantation register on a periodical basis, which is updated at the end of September and March each year.</p> <p>(iv) The collar girth is also to be reordered at the end of each year.</p> <p>(v) Third party monitoring mechanism is also in the State and if the plantations in the sample selected, it will also be monitored by the third party selected for this purpose.</p>
m	Silviculture & other activities	Only afforestation aimed plantation will be taken up, as the area falls under non-forest land.

The Compensatory Afforestation scheme at the cost of **Rs. 3,94,30,723/-** is technically sanctioned by the undersigned.



**Assistant Conservator of Forests
Blackbuck National Park, Velavadar,
Bhavnagar.**

Annexure-II

Compensatory Afforestation Plan - 38.87 ha. (39.00 ha.)

(Specially designed model for Blackbuck National Park, Velavadar)

Daily wages Rs.462.00

Item of Work

	Unit	Qty.	Unit Rate (Rs.)	Labour (Rs.)	Material (Rs.)	Total	Per Hactar	Total Expenditure *39.00 Ha. 10
1	3	4	5	6	7	8	9	10
1								
a.	Ha.	39	5432	5432	0	5432	5432	211848
b.	Ha.	39	12222	12222	0	12222	12222	476658
c.	Nos.	1000	20	20	0	20000	20000	780000
							37654	1468506
d.	Rmt	2000	4753	753	4000	9506000	243744	9506000
e.	Nos.	2	L/s.	L/s.	L/s.		25641	1000000
f.	Nos.	5	12012	8845	0	720704	18480	720704
g.	Nos.	16	4074	1000	2000	48000	1231	48000
							289095	11274704
							326749	12743210
2								
a.	Ha.	39	1358	1000	0	39000	1000	39000
b.	Ha.	39	12222	9000	0	351000	9000	351000
c.	Kg.	1000	679	50	450	500000	12821	500000
d.	Nos.	1000	1358	300	700	1000000	25641	1000000
							48462	1890000
e.	Lumsum	12 Months	271605	0	200000	200000	5128	200000
f.	Nos.	5	13212	9729	0	792733	20326	792733
							25455	992733
							73916	2882733
3								
a.	Ha.	39	1	1000	0	39000	1000	39000
b.	Nos.	As per Mortality	136	30	70	80000	2051	80000
c.	Nos.	1000	136	20	80	100000	2564	100000
d.	Lumsum	12 Months	271605	0	200000	200000	5128	200000
e.	Nos.	5	14534	10702	0	872015	22359	872015
							33103	1291015

Item of Work		Unit	Qty.	Unit Rate (Rs.)	Labour (Rs.)	Material (Rs.)	Total	Per Hectar	Total Expenditure *39.00 Ha.
1	2	3	4	5	6	7	8	9	10
7	6 Year								
	Protection & Up keep the area								
a.	Uprooting of invasive species (P. juliflora) etc.small	Ha.	39	1	1000	0	39000	1000	39000
c.	Miscellaneous vehicle maintenance and fuel charges	Lumsum	12 Months	271605	0	200000	200000	5128	200000
d.	Protection Watchers	Nos.	5	21276	21276	0	1276570	32733	1276570
	Total							38861	1515570
8	7 Year								
	Protection & Up keep the area								
a.	Uprooting of invasive species (P. juliflora) etc.small	Ha.	39	1	1000	0	39000	1000	39000
b.	Miscellaneous vehicle maintenance and fuel charges	Lumsum	12 Months	271605	0	200000	200000	5128	200000
c.	Protection Watchers	Nos.	5	23403	23403	0	1404170	36004	1404170
	Total							42133	1643170
9	8 Year								
	Protection & Up keep the area								
a.	Uprooting of invasive species (P. juliflora) etc.small	Ha.	39	1	1000	0	39000	1000	39000
b.	Miscellaneous vehicle maintenance and fuel charges	Lumsum	12 Months	271605	0	200000	200000	5128	200000
c.	Protection Watchers	Nos.	5	25743	25743	0	1544563	39604	1544563
	Total							45732	1783563
10	9 Year								
	Protection & Up keep the area								
a.	Uprooting of invasive species (P. juliflora) etc.small	Ha.	39	1	1000	0	39000	1000	39000
b.	Ploughing of the area to improve quality and growth of grass.	Ha.	39	12222	9000	0	351000	9000	351000
c.	Miscellaneous vehicle maintenance and fuel charges	Lumsum	12 Months	271605	0	200000	200000	5128	200000
d.	Protection Watchers	Nos.	5	28316	28316	0	1698970	43563	1698970
e.	Maintenance of Chainlink Fencing	Rmt.	1000	1358	200	800	1000000	25641	1000000
	Total							84333	3288970
11	10 Year								
	Protection & Up keep the area								
a.	Uprooting of invasive species (P. juliflora) etc.small	Ha.	39	1	1000	0	39000	1000	39000
b.	Miscellaneous vehicle maintenance and fuel charges	Lumsum	12 Months	271605	0	200000	200000	5128	200000
c.	Protection Watchers	Nos.	5	31148	31148	0	1868859	47919	1868859
	Total							54048	2107859
	Grand Total							847665	32858936
	Supervision charge @20%...							169533	6571787
	Grand Total...							1017198	39430723


 Assistant Conservator of Forests
 Blackbuck National Park, Velavadar,
 Bhavnagar.