

Compensary Afforestation Scheme for double degraded area

A Proposal for the approval of Forest land Proposed to be diverted for non forest purposes for "Road No.6" and "Raod G" in gandhinagar.

Detailed scheme of Compensatory Afforestation for degraded area **41.00 ha.** to be carried out in lieu of 20.41 ha. of Protected forest land to be diverted in Gandhinagar district.

1. Details of degraded land.

Village	Mahudi
Taluka	Mansa
Range	Mansa
District	Gandhinagar
Division	Gandhinagar
Block/ Patal, Compartment No.	1 Paiki
Area to be afforested	41.00 Ha.
Working circle	SMC

2. Description of Area.

Soil type	Murrumy
Topography	Plain/Revines
Slope	Medium & Gentle
Whether the area is bearing any root stock of Vegetation	Yes

3. Name of Plantation Programme:-

Compensatory Afforestation Scheme for Degraded Area.

4. Schedule of Plantation Programme:-

(i)	The Compensatory Afforestation on degraded area would be started by Dy.Conservator of Forest Gandhinagar Division as early as possible after the proposal is formally approved.
(ii)	Compensatory Afforestation will be done in 41.00 ha. area. The total afforestation cost will be about Rs. 31079599 + 4032000 (Protection Wall) = 3,51,11,599/- Gandhinagar Smart City Devlopment Ltd. Gandhinagar 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 double land on degraded Forest Areas. The prevailing wage rate is 452.00 per day.																					
b	Spacement	3 X 3 mtr., 1111 plants per ha.																					
c	Species to be planted (No. of plants per ha.)	<table border="1"> <thead> <tr> <th>Species to be Plants</th><th>Nos.</th><th>Plants Hights</th></tr> </thead> <tbody> <tr> <td>Neem</td><td>300</td><td>75 cm</td></tr> <tr> <td>Babool</td><td>400</td><td>65 cm</td></tr> <tr> <td>Bamboo</td><td>100</td><td>65 cm</td></tr> <tr> <td>Kanji</td><td>200</td><td>75 cm</td></tr> <tr> <td>Arjun Sadad</td><td>100</td><td>90 cm</td></tr> <tr> <td>Total</td><td>1111</td><td></td></tr> </tbody> </table>	Species to be Plants	Nos.	Plants Hights	Neem	300	75 cm	Babool	400	65 cm	Bamboo	100	65 cm	Kanji	200	75 cm	Arjun Sadad	100	90 cm	Total	1111	
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d	Nursery Technique	Nine months old polypot 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	Polypot raised plants will be planted during monsoon.																					
g	Soil & Moisture Conservation Works	(i) Pucca structure like Check dam, check wall, retaining wall (ii) Contour trenches 2.00 x 0.45 x 0.30, 300 Nos/ha. will be dug along the contour line. the dug out soil will be heaped on the down ward side. Gully plugging & Nala Banding using The loose stone available in the area will be carried out as per requirement. Seeds of Jatropha, Agave plants ...etc. will be planted during monsoon in the upper side of nala as per suitability.																					
h	Protection Trench	Barbed wire fencing, Seed sowing And planting of cuttings of Ipomea/Glarcidia along the fence																					
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, cutbacks, thinning etc. (as per species specific requirement) will be carried out at the age as per prescribed in the working plan.																					

l	Proposed monitoring mechanism	<p>(i) A plantation register is to be maintained.</p> <p>(ii) Monitoring is to be done as per the following norms. Forester – 100% RFO – 100% ACF – 20% DCF – 10%</p> <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) At the end of maintenance period, the area is aimed at full stocking and pole crop girth for all the species, except bamboo.</p> <p>(vi) Bamboo would be of the harvestable size by the end of 4th year.</p> <p>(vii) Third party monitoring mechanism is also in the State and if the plantation is in the sample selected, it will also be monitored by the third party selected for this purpose.</p>
m	Regeneration cleaning	Cut-back and promotion of root suckers.
n	Silviculture & other activities	Only afforestation aimed plantation will be taken up, as the area falls under degraded forest land.


Dy. Conservator of Forest
Gandhinagar Forest Division
Gandhinagar

The Compensatory Afforestation scheme at the cost of **Rs.3,51,11,599/-** is technically and administrative approved by the undersigned.


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Daily wages Rs. 452.00

Spacements = 3 m x 3 m				
1111 seedling / Ha				
1st year replacement 10 % = 111 seedling /ha				
2nd year replacement 20 % = 111+111 seedling /ha				
3rd year replacement 10 % = 111 seedling /ha				
Total Seedlings = 1333 seedling /ha				
Polypot size : 15 cm x 25 cm x 200				
Item of work	Qty.	Labour	Material	Total
1	2	3	4	5
0 year				
Nursery				
(a) Cost of soil, ,manure, seeds, water, fertilizer, insecticides, implements, rent of lands. Shade, etc. (including 10 % for casualty replacement)	1222	0	2666	2666
(b) labour : Preparation of beds, filling and arranging of bags,showing of seeds, watering shifting, weeding etc.	1222	6520	338	6858
(c) Seedling cost for casualty replacement in one year old (20%)	222	2059	616	2676
(d) Seedling cost for casualty replacement in two year old (10%)	111	1032	307	1339
Total		9611	3927	13539
2. Area Development (Land Preparation)				
(a) Survey, cutback and promotion of root suckers		4900	0	4900
(b) Aligment and digging of pits 0.45 X 0.45 X 0.45	1111@ 6.00	14148	0	14148
Total		19048	0	19048
(a) Natural fertilizer (Neem cake/ Castor cake)	1111 @ 5.00	0	14431	14431
Total		0	14431	14431
3. SMC Works				
(a) Check wall/ retaining wall /checkdem (all pucca only)	L.S.	17405	34549	51954
(b) Contour trench 2 M x 45 Cm x 30 Cm as per Rs.17.00/rmt (300 trench)	600 rmt.	13248	0	13248
Total		30653	34549	65202
4. Protection				
(a) Barbed wire fencing	Rmt. 450	16689	150197	166886
(b) Protection Wall (6 ft. hight from ground level)	Rmt. 1100	1612800	2419200	4032000

(c) Seed sowing and planting of cuttings of various plant species along the fence		1615	694	2310
Total		1631104	2570091	4201195
Sub Total of 0 year		77617	203799	281416
1st Year				
(a) Maintenance of nursery (April to June)	1222	5002	498	5500
(b) Transport of seedling for plantation	1111	2744	567	3311
(c) Planting with khamna of Min 1 m dia	1111	8433	0	8433
(d) Transport of seedling for casualty replacement	111	293	66	359
(e) 3 weeding cum soil working	1111	32873	0	32873
(f) Support watering 5 times @ 3.25		21013	30152	51165
(g) Protection / tending operation		6801	0	6801
(h) Tending to natural vegetation		1700	0	1700
(i) Contingency		0	1700	1700
Total for 1st year		78859	32984	111843
2nd Year				
(a) 2 weeding & soil working		18257	0	18257
(b) 20 % Casually replacement, transport and planting	111+111	307	1528	1835
(c) Natural fertilizer (neem cake / caster cake) etc.	Rs.5/ plant	0	17055	17055
(d) Support watering 3 times @ 3.25		13654	19598	33253
(e) Protection / tending operation		7368	0	7368
Total for 2nd year		39587	38181	77768
3rd Year				
(a) 2 weeding & soil working		19662	0	19662
(b) 10 % Casually replacement, transport and planting	111	165	824	989
(c) Natural fertilizer, neem cake etc.	Rs.5/ plant	0	18366	18366
(d) Support watering 1 times @ 3.25		4903	7035	11938
(e) Protection & maintenance of fencing / tending operation	L.S.	9918	0	9918
Total for 3rd year		34649	26225	60874
4th Year				
(a) 1 weeding & soil working		10532	0	10532
(b) Protection & Maintenance of fencing/ Tending operation	L.S.	10627	0	10627
Total for 4th year		21159	0	21159
5th Year				
Protection & maintenance of fencing/ tending operation	L.S.	11335	0	11335
Total for 5th year		11335	0	11335
6th Year				

Protection & maintenance of fencing/ tending operation	L.S.	12044	0	12044
Total for 6th year		12044	0	12044
7thYear				
Protection & maintenance of fencing/ tending operation	L.S.	12752	0	12752
Total for 7th year		12752	0	12752
8thYear				
Protection & maintenance of fencing/ tending operation	L.S.	13461	0	13461
Total for 8th year		13461	0	13461
9thYear				
Protection & maintenance of fencing/ tending operation	L.S.	14169	0	14169
Total for 9th year		14169	0	14169
10thYear				
Protection & maintenance of fencing/ tending operation	L.S.	14878	0	14878
Total for 10th year		14878	0	14878
SUB TOTAL :		330510	301189	631700
The Cost of Supervision/subsequent silvicultural Operations	20%	66102	60238	126340
		396612	361427	758039

Note :-

- (1) Seed sowing along fencing towards the inner side, and also in the plot.
- (2) Planting of cutting various plant species along the fencing towards outer side.

Compensatory afforestation will be done in 1.00 ha. Area.

1 Ha cost, Rs. 758039 X 41.00 Ha. = Total Cost Rs. 31079599+4032000 = **3,51,11,599/-**


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Name of works	Model No.	Area	Rate per Hac.	Amount (Daily wage: Rs.452)										Total Rs.
				Zero Year Rs.	Ist Year Rs.	IInd Year Rs.	III rd Year Rs.	IVth Year Rs.	Vth Year Rs.	VIIth Year Rs.	VIIIth Year Rs.	IXth Year Rs.	Xth Year Rs.	
0 Year 70 % Adv. work. Ist Year Operation.	SMC	41.00	281416	15570041	0	0	0	0	0	0	0	0	0	15570041
Ist Year 30 % Advance work Current year plantation			111843	0	4585557	0	0	0	0	0	0	0	0	4585557
2nd Year operation Maintanance of one year old plantation.			77768	0	0	3188492	0	0	0	0	0	0	0	3188492
3rd Year operation Maintanance of 2 years old plantation.			60874	0	0	0	2495817	0	0	0	0	0	0	2495817
4th year operation Maint.of 3 years old plantation.			21159	0	0	0	0	867538	0	0	0	0	0	867538
5th year operation Maint.of 4 years old plantation.			11335	0	0	0	0	0	464752	0	0	0	0	464752
6th year operation Maint.of 5 years old plantation.			12044	0	0	0	0	0	0	493799	0	0	0	493799
7th year operation Maint.of 6 years old plantation.			12752	0	0	0	0	0	0	0	522846	0	0	522846
8th year operation Maint.of 7 years old plantation.			13461	0	0	0	0	0	0	0	0	551893	0	551893
9th year operation Maint.of 8 years old plantation.			14169	0	0	0	0	0	0	0	0	0	580940	580940
10th year operation Maint.of 9 years old plantation.			14878	0	0	0	0	0	0	0	0	0	609987	609987
The Cost of Supervision/Subsequential/Silvicultureal operation			631700 126340											5179936
Total (+/- 2)			758039	15570041	4585557	3188492	2495817	867538	464752	493799	522846	551893	580940	35111599


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