

## Compensary Afforestation Scheme for double degraded area

A Proposal for permission for Diversion of **1.5324 Ha.** of Protected Forest land for Construction of 6.478 Km. Elevated Viaducts and 5 Stations from Ch. 25467.443 m to 31945.443 m and 0.679 Km. Elevated Viaducts and Ramp for Depot Entry in Connection with Ahmedabad Metro Rail Project Phase-II from Motera Stadium to Mahatma Mandir (Excl. E&M, Architectural Finishing and Roofing) Package-C2, for Gujarat Metro Rail Corporation Ltd. in Gandhinagar.

Detailed scheme of Compensatory Afforestation for degraded area **04.00 ha.** to be carried out in lieu of **1.5324 ha.** of Protected forest land to be diverted in Gandhinagar district.

### 1. Details of degraded land.

Village	<b>Bariya</b>
Taluka	Dahegam
Range	Dahegam
District	Gandhinagar
Division	Gandhinagar
Block/ Patal, Compartment No.	146 Paiki
Area to be afforested	<b>04.00 Ha.</b>
Working circle	Cope No.7-V/ AWC

### 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 <b>4.00 ha.</b> area. The total afforestation cost will be about <b>Rs.18,85,576/-</b> Executive Engineer, R&B, Division No.3, 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 <b>340.20</b> 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><b>Total</b></td><td><b>1111</b></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	<b>Total</b>	<b>1111</b>	
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<b>Total</b>	<b>1111</b>																						
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 <sup>st</sup> year three weeding soil working, Support watering will be provided if needed. 2 <sup>nd</sup> year two weeding soil working. 3 <sup>rd</sup> 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	(i) A plantation register is to be maintained.																					

	mechanism	<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 4<sup>th</sup> 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.

  
**( S.M. Damor )**  
**Dy. Conservator of Forest**  
**Gandhinagar Division**  
**Gandhinagar**

The Compensatory Afforestation scheme at the cost of **Rs.18,85,576/-** is technically and administrative approved by the undersigned.

  
**( S.M. Damor )**  
**Dy. Conservator of Forest**  
**Gandhinagar Division**  
**Gandhinagar**  
**24 FEB 2022**



**Sub:-** A Proposal for permission for Diversion of **1.5324 Ha.** of Protected Forest land for Construction of 6.478 Km. Elevated Viaducts and 5 Stations from Ch. 25467.443 m to 31945.443 m and 0.679 Km. Elevated Viaducts and Ramp for Depot Entry in Connection with Ahmedabad Metro Rail Project Phase-II from Motera Stadium to Mahatma Mandir (Excl. E&M, Architectural Finishing and Roofing) Package-C2, for Gujarat Metro Rail Corporation Ltd. in Gandhinagar. Detailed scheme of Compensatory Afforestation for degraded area **04.00 ha.** to be carried out in lieu of **1.5324 ha.** of Protected forest land to be diverted in Gandhinagar district.

**Daily wages Rs.340.-**

Spacemets = 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
<b>0 year</b>				
Nursery				
(a) Cost of soil, manure, seeds, water, fertilizier, insecticides, implements, rent of lands. Shade, etc. (including 10 % for casualty replacement)	1222	0	2007	2007
(b) labour : Preparation of beds, filling and arranging of bags, showing of seeds, watering shifting, weeding etc.	1222	4907	254	5161
(c) Seedling cost for casualty replacement in one year old (20%)	222	1550	464	2014
(d) Seedling cost for casualty replacement in two year old (10%)	111	777	231	1008
<b>Total</b>		<b>7234</b>	<b>2956</b>	<b>10190</b>
<b>2. Area Development ( Land Preparation )</b>				
(a) Survey, cutback and promotion of root suckers		3688	0	3688
(b) Aligment and digging of pits 0.45 X 0.45 X 0.45	1111@ 6.00	10648	0	10648
<b>Total</b>		<b>14336</b>	<b>0</b>	<b>14336</b>
(a) Natural fertilizer (Neem cake/ Castor cake)	1111 @ 5.00	0	10862	10862
<b>Total</b>		<b>0</b>	<b>10862</b>	<b>10862</b>
<b>3. SMC Works</b>				
(a) Check wall/ retaining wall /checkdem (all pucca only)	L.S.	13100	26004	39104
(b) Contour trench 2 M x 45 Cm x 30 Cm as per Rs.17.00/rmt	600 rmt.	9971	0	9971
<b>Total</b>		<b>23071</b>	<b>26004</b>	<b>49075</b>
<b>4. Protection</b>				
(a) Barbed wire fencing	L.S.	3879	39104	42983
(b) Seed sowing and planting of cuttings of Ipomea/ Glaricidia along the fence		1216	522	1738
<b>Total</b>		<b>5095</b>	<b>39626</b>	<b>44721</b>
<b>Sub Total of 0 year</b>		<b>49736</b>	<b>79448</b>	<b>129184</b>
<b>1st Year</b>				
(a) Maintenance of nursery (April to June)	1222	3765	375	4140
(b) Transport of seedling for plantation	1111	2065	427	2492
(c) Planting with khamna of Min 1 m dia	1111	6347	0	6347
(d)Transport of seediling for casualty replacement	111	220	49	269
(e) 3 weeding cum soil working	1111	24742	0	24742
(f) Support watering 5 times @ 3.25		15816	22694	38510
(g) Protection / tending operation		5119	0	5119
(h) Tending to natural vegetation		1280	0	1280
(i) Contigency		0	1280	1280
<b>Total for 1st year</b>		<b>59354</b>	<b>24825</b>	<b>84179</b>




<b>2nd Year</b>				
(a) 2 weeding & soil working		13741	0	13741
(b) 20 % Casually replcement, transport and planting	111+111	231	1150	1381
(c) Natural fertilizer (neem cake / caster cake ) etc.	Rs.5/ plant	0	12836	12836
(d ) Support watering 3 times @ 3.25		10277	14751	25028
(e) Protection / tending operation		5546	0	5546
<b>Total for 2nd year</b>		<b>29795</b>	<b>28737</b>	<b>58532</b>
<b>3rd Year</b>				
(a) 2 weeding & soil working		14799	0	14799
(b) 10 % Casually replcement, transport and planting	111	125	621	746
(c) Natural fertilizer, neem cake etc.	Rs.5/ plant	0	13823	13823
(d ) Support watering 1 times @ 3.25		3690	5295	8985
(e) Protection & maintenance of fencing / tending operation	L.S.	7466	0	7466
<b>Total for 3rd year</b>		<b>26080</b>	<b>19739</b>	<b>45819</b>
<b>4thYear</b>				
(a) 1 weeding & soil working		7927	0	7927
(b) Protection & Maintenance of fencing/ Tending operation	L.S.	7998	0	7998
<b>Total for 4th year</b>		<b>15925</b>	<b>0</b>	<b>15925</b>
<b>5thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	8532	0	8532
<b>Total for 5th year</b>		<b>8532</b>	<b>0</b>	<b>8532</b>
<b>6thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	9065	0	9065
<b>Total for 6th year</b>		<b>9065</b>	<b>0</b>	<b>9065</b>
<b>7thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	9598	0	9598
<b>Total for 7th year</b>		<b>9598</b>	<b>0</b>	<b>9598</b>
<b>8thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	10132	0	10132
<b>Total for 8th year</b>		<b>10132</b>	<b>0</b>	<b>10132</b>
<b>9thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	10664	0	10664
<b>Total for 9th year</b>		<b>10664</b>	<b>0</b>	<b>10664</b>
<b>10thYear</b>				
Protection & maintenance of fencing/ tending operation	L.S.	11198	0	11198
<b>Total for 10th year</b>		<b>11198</b>	<b>0</b>	<b>11198</b>
<b>Sub Total of 1 to 10 year</b>		<b>190343</b>	<b>73301</b>	<b>263644</b>
<b>SUB TOTAL :</b>		<b>240079</b>	<b>152749</b>	<b>392828</b>
The Cost of Supervision/subsequential silvicultureal Operations	20%	48016	30550	78566
<b>GRAND TOTAL :</b>		<b>288095</b>	<b>183299</b>	<b>471394</b>

**Note :-**

- (1) Seed sowing along fencing towards the inner side, and also in the plot.
- (2) Planting of cutting of ipomea//Glaricidia along the fencing towards outer side.

Compensatory afforestation will be done in 1.00 ha. Area. The Total afforestation cost will be Rs. 471394/-

<b>Par Cost</b>	<b>Rs.</b>	<b>Ha.</b>	<b>Total Cost Rs.</b>
1 Ha cost	471394.00	4.00	1885576.00

  
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Name of works	Model No.	Area (Ha.)	Rate per (Ha.)	Amount (Daily wage Rs.340.20)											Total Rs.	
				Zero Year Rs.	1st Year Rs.	2nd Year Rs.	III rd Year Rs.	IVth Year Rs.	Vth Year Rs.	VIth Year Rs.	VIIth Year Rs.	VIIIth Year Rs.	IXth Year Rs.	Xth Year Rs.		
0 Year 70 % Adv.work. 1st Year Operation.	SMC	4.00	129184	516736	0	0	0	0	0	0	0	0	0	0	0	516736
1st Year 30 % Advance work Current year plantation			84179	0	336716	0	0	0	0	0	0	0	0	0	0	336716
2nd Year operation Maintanance of one year old plantation.			58532	0	0	234128	0	0	0	0	0	0	0	0	0	234128
3rd Year operation Maintanance of 2 years old plantation.			45819	0	0	0	183276	0	0	0	0	0	0	0	0	183276
4th year operation Maint of 3 years old plantation.			15925	0	0	0	0	63700	0	0	0	0	0	0	0	63700
5th year operation Maint of 4 years old plantation.			8532	0	0	0	0	0	34128	0	0	0	0	0	0	34128
6th year operation Maint of 5 years old plantation.			9065	0	0	0	0	0	0	36260	0	0	0	0	0	36260
7th year operation Maint of 6 years old plantation.			9598	0	0	0	0	0	0	0	38392	0	0	0	0	38392
8th year operation Maint of 7 years old plantation.			10132	0	0	0	0	0	0	0	0	40528	0	0	0	40528
9th year operation Maint of 8 years old plantation.			10664	0	0	0	0	0	0	0	0	0	42656	0	0	42656
10th year operation Maint of 9 years old plantation.			11198	0	0	0	0	0	0	0	0	0	0	44792	44792	44792
SUB Total (+/- 2)			392828	516736	336716	234128	183276	63700	34128	36260	38392	40528	42656	44792	44792	1571312
The Cost of Supervision / Subsequent/Silvicultural opertion (20%)			78566	-	-	-	-	-	-	-	-	-	-	-	-	314264
GRAND Total			471394	516736	336716	234128	183276	63700	34128	36260	38392	40528	42656	44792	44792	1885576

  
 ( S.M. Damor )  
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