

Full Title of the Proposal :	Diversion of 0.440 Ha. of forest land in favour of Punjab PWD B&R for construction of Single Span (4-laned) 135m long Steel Bridge on Phagwara-Banga-Nawanshahar-Ropar at RD Km. 86.900 on Sirhind Canal on NH-344A including approaches in Ropar City under Rupnagar Forest Division & Distt Rupnagar (Punjab).
Proposal No.	FP/PB/ROAD/147091/2021

CHECK LIST SERIAL NUMBER : 17

"SCHEME FOR COMPENSATORY AFFORESTATION"

Detail scheme for Compensatory Afforestation to be carried out in lieu of 0.440 Ha. of forest area to be diverted for construction of Single Span (4-laned) 135m long Steel Bridge on Phagwara- Banga- Nawanshahar-Ropar at RD Km. 86.900 on Sirhind Canal on NH-344A including approaches in Ropar City under Rupnagar Forest Division & Distt Rupnagar (Punjab).

1. **Details of degraded forest land / non-forest land**

Location of Comp. Aff. Site Name = Fatehpur Forest (Map attached)

Comp. Aff. Area = 1.10 Ha., No. of Plants will be planted = 1100 Nos.

Forest Division - Rupnagar , Forest Range- Rupnagar,

Tehsil -Rupnagar & District - Rupnagar.

2. **Description of Area**

i. Whether the site selected for Compensatory Afforestation is a land bank or not - Yes,

Comp. Aff. Site Name- Fatehpur Forest

ii. If the CA site is other than the land bank, reasons be given: **The Area is suitable for compensatory.**

iii. In case of non-forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary...N.A....Km approximately.

iv. Soil type: Alive

v. Topography: a. Plain

b. Slope: Steep / Medium / Gentle

vi. Whether the area is bearing any root stock of Vegetation: **Yes.**

3. **Plantation Model :**

Copy of the approved Compensatory Afforestation Scheme / Model showing component wise physical and financial break up to be enclosed.

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4. **Schedule of Plantation Programme**

Detail of year wise break-up of requirements of funds is as under:-

Year	Area of CA (Hec.)	Amount of CA
Plantation Year	1.10 Ha.	160040
1 st Year Mtc.	1.10 Ha.	76692
2 nd Year Mtc.	1.10 Ha.	65936
3 rd Year Mtc.	1.10 Ha.	64424
4 th Year Mtc.	1.10 Ha.	49459
5 th Year Mtc.	1.10 Ha.	18941
6 th Year Mtc.	1.10 Ha.	18941
7 th Year Mtc.	1.10 Ha.	18941
8 th Year Mtc.	1.10 Ha.	18941
9 th Year Mtc.	1.10 Ha.	18944
10 th Year Mtc.	1.10 Ha.	530200
Total		

1	Plantation Cost including 10 year mtc.	530200
2	Protection Measures (Barbed wire Fencing)	635625
3	Entry Point Activities	53000
	Total	1218825
4	NPV	390280
	G. Total	1609105

5. **Technical Details**

Technical details of Compensatory Afforestation Scheme are as follows: -

- | | |
|---|---|
| (i) General Details : | Detail as under :- |
| (ii) Spacing : | 3 Mtr x 3 Mtr. |
| (iii) Species : | Shisham, Khair, Kikar, Jamun, Bahera and Other Misc |
| (iv) Plantation Method : | Degraded Planting |
| (v) Soil and Moisture Conservation Works : | N.A. |
| (vi) Protection (Fencing, Watch man, People's Participation etc.) : | B. Wire Fencing, Watch & Ward. |
| (vii) Proposed Monitoring Mechanism: | N.A. |
| (viii) Any other information: | NII |

Divisional Forest Officer,
Rupnagar Forest Division


Compensatory Afforestation Scheme with 10 years mtc. for diversion of 0.440 Ha. of forest land in favour of Punjab PWD B&R for construction of Single Span (4-laned) 135m long Steel Bridge on Phagwara-Banga-Nawanshahar-Ropar at RD Km. 86.900 on Sirhind Canal on NH-344A including approaches in Ropar City under Rupnagar Forest Division & Distt Rupnagar (Punjab).


1) Diverted Forest Area = 0.44 Ha		4) Site of CA :		Fatehpur	
2) Proposed C.A. Area = 1.10 Ha		5) Species will be planted = Shisham, Teak, Khair, Kikar, Sukhchain, Bahera, Drek and Other Misc.			
3) No. of plants to be planted = 1100 Plants		No. of Plants to be planted in 1 Ha: 1000			
Estimate for planting				Daily Wage Rate : 368/-	
Sr. No.	Name of Work	Unit	Unit Cost (In Rs.)	Qty	Total Amt
Nursery					
1	Cost of Plants	1 No	15.00	1,100	16,500
Earth Work					
2	Site /Jungle Clearance (60%)	Ha.	6,021.76	0.60	3,613
3	Alignment & Dagbailing	Ha.	1,104.00	1.00	1,104
4	Earth Work- Digging of Pits 1000 x 0.5m x 0.5m x 0.4m Heavy Soil	1M ³	113.74	210	23,886
5	Kana Stubbing 40%	Ha.	30,109.02	0.40	12,044
Planting					
6	Refilling of Pits 1000 x 0.5m x 0.5m x 0.3m	100 cum	3,082.00	210	6,472
7	Loading of Plants (1000+10% Wastage=1100)	100 No	27.60	1,100	304
8	Carriage of P. Bags in trolley from nursery to plantation site (1100 plants= 1 trolley) (for 10 Km)	1 trolley for 10 kms	2,760.00	1.00	2,760
9	Unloading of Plants (1000+10% Wastage=1100)	100 No	18.40	1,100	202
10	Carriage of Plants (1100+10% Wastage=1100 above 50 m distance)	100 No	23.00	1,100	253
11	Loading of FYM / Vermicompost	1 trolley	368.00	0.10	37
12	Carriage of Vermicompost (10 kms)	1 trolley	1,840.00	0.10	184
13	Unloading of FYM / Vermicompost	1 trolley	184.00	0.10	18
14	Planting of Plants (1000 No Including 10% replacement)	100 No	468.36	1,100	5,152
15	Spot Irrigation (1000 Plants)	100 No	368.00	1,000	3,680
16	Application of Insecticide (2 times)	100 No	64.40	2,000	1,288
17	Application of Fertilizers (2 times)	100 No	64.40	2,000	1,288
18	Weeding & Hoeing 3 times	100 No	401.12	3,000	12,034
19	Replanting of Plants 10%	100 No	468.36	100	468
20	Rejungle Clearance (2 times)	Per Ha.	6,021.76	1.20	7,226
21	Restubbing of Kana (1 time)	Ha.	30,109.02	0.40	12,044
22	Watch & Ward for every 10 Ha. (7 months)	Man year	1,14,816.00	1Man 7 Month	6,698
Material					
23	i) Insecticides/Fertilizers	L/s			10,000
24	ii) Vermicompost	L/s			2,500
25	iii) POL	L/s			10,000
				Sub Total	1,39,754

Maintenance I Year					
1	Cost of plants for 30% replacement	1 No.	15.00	300	4,500
2	Reopening of Pits 300 x 0.5m x 0.5m x 0.3m	1 m ³	66.90	11.02	737
3	Refilling of Pits with earth in other soils 300 x 0.5m x 0.5m x 0.3m	1 m ³	30.82	11.02	340
4	Loading & Unloading of Plants	100 No.	46.00	330	152
5	Carriage of Plants (300+10% Wastage=330 avg. distance upto 10 km.)	1000 No	2,760.00	330	911
6	Spreading of plants pit to pit	100 No	23.00	300	69
7	Re-planting of Plants	100 No	468.36	330	1,546
8	Spot Irrigation	100 No.	368.00	300	368
9	Weeding & Hoeing (thrice)	100 No	401.12	3,000	12,034
10	App. Of Fertilizer (two times)	100 No	64.40	2,000	1,288
11	App. Of Insecticide (two times)	100 No	64.40	2,000	1,288
12	Rejungle Clearance (2 times)	Ha.	6,021.76	1.20	7,226
13	Restubbing of Kana	Ha.	30,109.02	0.40	12,044
14	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
15	POL	L/s			5,000
16	Material and supply	L/s			5,000
				Sub Total	63,983
Maintenance II Year					
1	Cost of plants for 15% replacement	No.	15.00	150	2,250
2	Reopening of Pits 150 x 0.5m x 0.5m x 0.3m	1 m ³	66.90	5.51	369
3	Refilling of Pits with earth in other soils 150 x 0.5m x 0.5m x 0.3m	1 m ³	30.82	5.51	170
4	Loading & Unloading of Plants	100 No.	46.00	165	76
5	Carriage of Plants (No. of plants = 150 avg. distance upto 10 km.)	1000 No	2,760.00	165	455
6	Spreading of plants pit to pit	100 No	23.00	150	35
7	Re-planting of Plants	100 No	468.36	165	773
8	Spot Irrigation	100 No.	368.00	150	368
9	Weeding & Hoeing (2 times)	100 No	401.12	2,000	8,022
10	Rejungle Clearance (2 times)	Ha.	6,021.76	1.20	7,226
11	Stubbing of Kana	Ha.	30,109.02	0.40	12,044
12	Pruning of plants	100 No.	93.67	1,000	937
13	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
14	POL	L/s			5,000
15	Material and supply	L/s			5,000
				Sub Total	54,205

Maintenance III Year					
1	Cost of plants for 10% replacement	No.	15.00	100	1,500
2	Reopening of Pits 100 x 0.5m x 0.5m x 0.3m	1 m3	66.90	3.67	246
3	Refilling of Pits with earth in other soils 100 x 0.5m x 0.5m x 0.3m	1 m3	30.82	3.67	113
4	Loading & Unloading of Plants	100 No.	46.00	110	51
5	Carriage of Plants (No. of plants = 100 avg. distance upto 10 km)	1000 No	2,760.00	110	304
6	Spreading of plants pit to pit	100 No	23.00	100	23
7	Re-planting of Plants	100 No	468.36	110	515
8	Spot Irrigation	100 No.	368.00	100	368
9	Weeding & Hoeing (2 times)	100 No	401.12	2,000	8,022
10	Rejungle Clearance (2 times)	Ha.	6,021.76	1.20	7,226
11	Stubbing of Kana	Ha.	30,109.02	0.40	12,044
12	Pruning of plants	100 No.	93.67	1,000	937
13	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
14	POL	L/s			5,000
15	Material and supply	L/s			5,000
				Sub Total	52,830
Maintenance IV Year					
1	Cost of plants for 5% replacement	No.	15.00	50	750
2	Reopening of Pits 50 x 0.5m x 0.5m x 0.3m	1 m3	66.90	1.84	123
3	Refilling of Pits with earth in other soils 0.5m x 0.5m x 0.3m	1 m3	30.82	1.84	57
4	Loading & Unloading of Plants	100 No.	46.00	55	25
5	Carriage of Plants (No. of plants = 50 avg. distance upto 10 km)	1000 No	2,760.00	55	152
6	Spreading of plants pit to pit	100 No	23.00	50	12
7	Re-planting of Plants	100 No	468.36	55	258
8	Spot Irrigation	100 No.	368.00	50	184
9	Weeding & Hoeing (2 times)	100 No	401.12	2,000	8,022
10	Rejungle Clearance (2 times)	Ha.	6,021.76	1.20	7,226
11	Pruning of plants	100 No.	93.67	1,000	937
12	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
13	POL	L/s			5,000
14	Material and supply	L/s			5,000
				Sub Total	39,226
Maintenance V Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482
Maintenance VI Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482
Maintenance VII Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482
Maintenance VIII Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482

Maintenance IX Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482
Maintenance X Year					
1	Watch & Ward for every 10 Ha.	Man year	1,14,816.00	1 Man Year	11,482
				Sub Total	11,482
				TOTAL	4,18,889
	Over Head expenses 5%				20,944
	Enhancement due to wage escalation @10%				41,889
				G.Total	4,81,722
				Or Say	4,82,000
Note:- The watch and ward after 5 years will carry out the necessary operations of Pruning.					
	Total Cost per plant (in Rs)		482.00		
	Total Cost of Plantation of 1100 Plants	1 Plant	482.00	1,100	5,30,200
Protection Measures					
	Barbed Wire Fencing				
1	Cost of Barbed Wire (4 Line) 700 x 4 = 2800 Rmt	Per Rmt	175.00	2,800	4,90,000
2	Cost of Pillars (4 Nos Hock)	Nos	550.00	233	1,28,150
3	Fixing of charges	Nos	75.00	233	17,475
	Total Expenditure on Protection Measures				6,35,625
Entry Point Activities 10 %					
1	Livelihood trainings with equipment's (cutting and tailoring/ Net Ware, awarness camp)	L/s	-	-	53,000
	Total Expenditure on Protection Measures				53,000
Grand Total of CA Scheme for 0.44 Ha					12,18,825
	Cost of Forest Land (NPV)	1 Ha	8,87,000	0.44	3,90,280
					16,09,105


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 Divisional Forest Officer,
 Rupnagar.