

Diversion of 0.0069 hectare forest land for construction of approach road for proposed Retail Outlet of M/s HPCL at Bathinda (WML) (Between Bibiwala Chowk and Rose Garden), Khasra no. 2150/2, CH. 130.331(RHS), NH-64 (NEW NH-07), on Bathinda - Barnala road, Tehsil & Distt. Bathinda. (FP/PB/Approach/49141/2020)

"SCHEME FOR COMPENSATORY AFFORESTATION"

Detail scheme for compensatory afforestation to be carried out in lieu of **0.0069 ha.** of forest area to be diverted for **construction of approach road for proposed Retail Outlet of M/s HPCL at Bathinda (WML) (Between Bibiwala Chowk and Rose Garden), Khasra no. 2150/2, CH. 130.331(RHS), NH-64 (NEW NH-07), on Bathinda - Barnala road, Tehsil & Distt. Bathinda. (FP/PB/Approach/49141/2020)**

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

District **Bathinda** Village **Bathinda**

Teh **Bathinda**

Name of Forest Division **Bathinda** Range **Bathinda**

Block/Compartment/Survey No **Bathinda** Area to be afforested **Bathinda Branch Canal RD 427-430 L/s (Bathinda Range)**

2. Description of Area :

i Whether the site selected for Compensatory Afforestation is a land bank or not : **YES**

ii. If the CA site is other than the land bank, reasons be given : **N.A.**

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.**

iv Soil type : **Sandy.**

v. Topography :- a. Hilly/Undulating/**Plain**
b. Slope : Steep/Medium/Gentle - **N.A.**

vi. Whether the area is bearing any root stock of vegetation **Not**

3. Plantation Model :

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

Date **18/01/2021**

Place **Bathinda**

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2. Schedule of Plantation Programme :-

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

Year	Area	Rate/ha.	Total Amount
0 th Year	0.100	186465	18647
1 st Year	0.100	73045	7305
2 nd Year	0.100	45880	4588
3 rd Year	0.100	42683	4268
4 th Year	0.100	39565	3957
5 th Year	0.100	5969	597
6 th Year	0.100	5969	597
7 th year	0.100	5969	597
8 th year	0.100	5969	597
9 th year	0.100	5969	597
10 th year	0.100	5969	597
Overhead charges 5 %	0.100	21172	2117
Wage Enhancement @ 10%	0.100	42376	4238
Total		487000.00	48700.00

3. Technical details :

Technical details of Compensatory Afforestation Scheme are as follows :

- (a) General Details : **Afforestation by Artificial Regeneration**
- (b) Spacement :- **3mX3m**
- (c) Species : **Ailanthus, Cassia siamia, Shisham, Neem, Jaman, etc.**
- (d) Plantation Method : **Pit & Trench**
- (e) Soil and Moisture Conservation Works : **Digging of Trenches**
- (f) Protection (Fencing, Watch man, People's Participation etc) : **Fencing & Watch**
- (g) Proposed Monitoring Mechanism : **Forest Department**
- (h) Any other information : ---

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Plantation Model For Standard Plantation under Compensatory Afforestation

Plants Per Hectare : 1000 Nos.

Wage Rate Rs. 328

Land bank :- Bathinda Branch Canal RD 427-430 L/s (Bathinda Range)					
Sr. No.	Name of work	Unit	Qty.	Unit Cost (in Rs.)	Amount
	Nursery				
	Nursery cost of raising plants	1100	1100	20.00	22000.00
A	Soil Work				
1	Site / Jungle Clearance (25%)	Ha.	0.5	5367.22	2683.61
2	Alignment & Dagbaling	Ha.	1	984.00	984.00
3	Earth works in Digging of Pits 1000 x 0.5 m x 0.5 m x 0.4 m	1 M3	100	101.38	10138.00
5	Kana Stubbing 25%	Ha.	0.25	26836.00	6709.00
B	Plantation Work				
1	Refilling of Pits 1000x0.5mx0.5mx0.3	100 cum	75	2747.00	2060.25
2	Loading & Unloading of Plants (1000+10% Wastage=1100)	100 No.	1100	550.00	6050.00
3	Carriage of Plants (1000+10% wastage =1100 avg. distance upto 10 km.)	100 No.	1100	196.80	2164.80
4	i) Carriage from site to site	100 No.	1000	131.20	1312.00
	ii) Planting of Plants (1000 No. including 10% replacement)	100 No.	1000	984.00	9840.00
5	Spot Irrigation (1000 Plants)	100 No.	1000	205.00	2050.00
6	Application of Insecticide (2 Times)	100 No.	1000	41.00	410.00
7	Application of Fertilizers (2 Times)	100 No.	1000	41.00	410.00
8	Weeding & Hoeing 3 Times	100 No.	3000	357.52	10725.60
9	Hand Watering (12 Times)	100 No.	12000	205.00	24600.00
10	Replanting of Plants 10%	100 No.	100	579.11	579.11
11	Rejungle Clearance (2 Times)	Per Ha.	1	2378.00	2378.00
12	Covering (25% plants) of plants	100 No.	250	295.20	738.00
13	Uncovering of plants	100 No.	250	32.80	82.00
14	Restubbing of Kana (1 Time)		0.25	26836.30	6709.08
15	Laying out & fixing of Barbed Wire	L/s			7872.00
16	Watch & Ward for every 10 Ha. (7 Months)	Man Year	1 Man 7 Month	8528.00	5969.60
17	Material				
	i) Insecticides / Fertilizers	L/s			5000.00
	ii) POL	L/s			5000.00
	iii) Barbed Wire	L/s			50000.00
	Sub Total				186465.05
	Maintenance 1 Year				
1	Cost of raising plants for 30% replacement	1 No.	300	20.00	6000.00
2	Reopening of Pits 300 x 0.50 x 0.50 x 0.30	1 m3	21.6	59.63	1341.68

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3	Refilling of pits with earth in other soils 300 x 0.50 x 0.50 x 0.30	1 m3	21.6	27.47	618.08
4	Loading & Unloading of Plants	1 No.	300	2.46	738.00
5	Carriage of Plants (300+10% Wastage = 330 avg. distance upto 10 Km.)	100 No.	1	196.20	196.20
6	Spreading of plants pit to pit	100 No.	165	131.20	216.48
7	Re-Planting to plants	100 No.	165	329.08	542.98
8	Spot Irrigation	100 No.	165	205.00	338.25
9	Weeding & Hoeing (three)	100 No.	3000	357.52	10725.60
10	Application of Insecticide (2 Times)	100 No.	1000	41.00	410.00
11	Application of Fertilizers (2 Times)	100 No.	1000	41.00	410.00
12	Hand Watering (6 Times)	100 No.	6000	357.52	21451.20
13	Rejungle Clearance (2 Times)	Per Ha.	1	2378.00	2378.00
14	Restubbing of Kana	Per Ha.	0.25	26836.00	6709.00
15	Watch & Ward for every 10 Ha. (10 Months)	Man Year	1/10 Man Yr.	8528.00	5969.60
16	Repair of Barbed Wire	L/s			5000.00
17	POL & Machinery	L/s			5000.00
18	Material and Supply	L/s			5000.00
	Sub Total				73045.06
	2nd Year Maintenance				
1	Cost of raising plants for 15% replacement	1 No.	150	20.00	3000.00
2	Reopening of Pits 150 x 0.60 x 0.60 x 0.40	1 m3	21.6	59.63	644.00
3	Refilling of pits with earth in other soils 150x 0.60 x 0.60 x 0.40	1 m3	21.6	27.47	296.68
4	Loading & Unloading of Plants	1 No.	75	2.46	184.50
5	Carriage of Plants Wastage = 75 avg. distance upto 10 Km.)	500 No.	1	196.20	196.20
6	Spreading of plants pit to pit	100 No.	75	131.20	98.40
7	Re-Planting to plants	100 No.	75	229.09	171.82
8	Spot Irrigation	100 No.	75	205.00	153.75
9	Weeding & Hoeing (Twice)	100 No.	2000	357.52	7150.40
10	Hand Watering (5 Times)	100 No.	5000	205.00	10250.00
11	Rejungle Clearance (2 Times)	Per Ha.	1	2378.00	2378.00
12	Pruning to Plants	100 No.	100	387.61	387.61
13	Watch & Ward for every 10 Ha.	Man Year	1/10 Man Yr.	8528.00	5969.60
14	Repair of Barbed Wire	L/s			5000.00
15	POL & Machinery	L/s			5000.00
18	Material and Supply	L/s			5000.00
	Sub Total				45880.96
	3rd Year Maintenance				

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1	Cost of raising plants for 10% replacement	1 No.	100	20.00	2000.00
2	Reopening of Pits 100 x 0.50 x 0.50 x 0.40	1 m3	10	5963.00	429.34
3	Refilling of pits with earth in other soils 100 x 0.50 x 0.50 x 0.30	1 m3	7.5	27.47	197.78
4	Loading & Unloading of Plants	1 No.	100	2.46	246.00
5	Carriage of Plants 50 avg. distance upto 10 Km.)	100 No.	100	1.00	100.00
6	Spreading of plants pit to pit	100 No.	100	131.20	131.20
7	Re-Planting to plants	100 No.	100	229.09	229.09
8	Spot Irrigation	100 No.	100	205.00	205.00
9	Weeding & Hoeing (twice)	100 No.	2000	357.52	7150.40
10	Hand Watering (5 Times)	100 No.	5000	205.00	10250.00
11	Pruning to Plants 20%	100 No.	200	387.61	775.22
12	Watch & Ward for every 10 Ha.	Man Year	1/10 Man Yr.	8528.00	5969.60
13	Repair of Barbed Wire	L/s			5000.00
14	POL & Machinery	L/s			5000.00
15	Material and Supply	L/s			5000.00
	Sub Total				42683.63
	4th Year Maintenance				
1	Cost of raising plants for 5% replacement	1 No.	50	20.00	1000.00
2	Reopening of Pits 50 x 0.50 x 0.50 x 0.40	1 m3	5	5963.00	429.34
3	Refilling of pits with earth in other soils 100 x 0.50 x 0.50 x 0.30	1 m3	3.75	27.47	197.78
4	Loading & Unloading of Plants	1 No.	50	2.46	123.00
5	Carriage of Plants 50 avg. distance upto 10 Km.)	100 No.	50	1.00	50.00
6	Spreading of plants pit to pit	100 No.	50	131.20	65.60
7	Re-Planting to plants	100 No.	50	229.09	114.54
8	Spot Irrigation	100 No.	50	205.00	102.50
9	Weeding & Hoeing (twice)	100 No.	2000	357.52	7150.40
10	Hand Watering (4 Times)	100 No.	4000	205.00	8200.00
11	Pruning to Plants 30%	100 No.	300	387.61	1162.83
12	Watch & Ward for every 10 Ha.	Man Year	1/10 Man Yr.	8528.00	5969.60
13	Repair of Barbed Wire	L/s			5000.00
14	POL & Machinery	L/s			5000.00
15	Material and Supply	L/s			5000.00
	Sub Total				39565.59
	5th Year Maintenance				

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1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	6th Year Maintenance				
1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	7th Year Maintenance				
1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	8th Year Maintenance				
1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	9th Year Maintenance				
1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	10th Year Maintenance				
1	Watch & Ward for every 10 Ha. (10 Motnts)	Man Year	1/10 Man Yr.	8528.00	5969.60
	Sub Total				5969.60
	Total				423457.89
	Over Head expenses 5%				21172.89
	Wage Enhancement @ 10%				42345.79
	G. Total				486976.58
	Or say				486977
				Per plant	487
1	Cost of Compensatory Afforestation of 100 Plants @ 487/- Rs. Per Plant			CA	48700.00
2	Entry Point Acitivity 10% (1)			EPA	4870.00
3	NPV OF 'area 0.0069*626000/-Per Ha.			NPV	4319.00
	Grand Total (1+2+3)				57889.00

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