Scheme for
Site Specific Compensatory Afforestation

Over 26.444 **Ha** of Non-forest Govt. Land Identified

In Village Latiagura Under Thuamul Rampur Tahasil in Kalahandi District (Kalahandi South Division)

against **Khairibandhan Irrigation Project** Located in Jashipur Block of Mayurbhanj district of Department of Water Resource, Odisha

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Prepared by

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1. Introduction

Khairibhandan river originates from the hill range of Similipal R.F. in Jashipur Block of Mayurbhanj district. It travels a distance of 22.50 Km almost in West direction and finally meets with the River Baitarani near the village Adipur of Keonjhar district. It is observed that the flow in the river is perennial. It is proposed to construct a barrage on River Khairibandhanear the village Analabeni in Jashipur Block of Mayurbhanj District.

The GCA for the proposed project is 8700 ha. It is proposed to provide irrigation to CCA of 6950 ha. The command area is moderately populated covering approximate 45 numbers of villages. The population mainly consists of S.T., S.C., and backward class people. The agricultural production depends on the natural rainfall, which is inadequately, untimely and unevenly distributed. Consequently, the agricultural production, which is only source of income of the locality, is much more belowthe average level. As such financial status of the people in this area is low. The project is absolutely necessary to improve agricultural output and economy of the region to mitigate the misery of the sizable population mostly belonging to SC, ST and backward class.

2. Selection of Site

Non-forest Govt. land to the extent of 26.440 ha in a compact patch is not available in Mayurbhanj District.Therefore, considering the greater interest of the project and instruction of the District Collector vide letter no 1205, dated 10.07.2019, the equivalent non-forest Govt. land for the purpose of raising compensatory afforestation has been identified in the village: Latiagura,Tehsil: Thuamul Rampur.

The details of plot wise land schedule are furnished below.

Land schedule of the proposed compensatory afforestation area

Tahasil	village	Khata no	Plot.no	Area of the plot (Ac)	Area considered (Ac)	Kisam
Th. Rampur	Latiagura	39	153(P)	51.12	16.72	Dangar
			167(P)	57.18	48.62	Dangar
Total					**65.34**	

The site is located on survey of India Topo Sheet No E44F2 between Latitude: 19° 36’ 19.94” -19° 35' 54.94, Longitude: 83°01'51.21”-83°2'0.40” E(Annexure-I) and at a distance of 15 KM from Tehsil Headquarters. The proposed area is free from encroachment and encumbrances and suitable for plantation.

The land details jointly verified by Forest and Revenue authorities are enclosed along with the village map showing the above land details for the proposed compensatory afforestation as **Annexure –II.**

3. Description of the existing vegetation

There are bushes spread over the area, there are also few trees exist on the north-west part of the land where a stream follows the boundary of the proposed Compensatory Afforestation Land.

4. Soil & Topography

The topography of the area is mainly foot hill with slope fairly gentle in nature. The land is sloping from south to north. The minimum elevation of the area is at RL. 660 m. in the north and maximum elevation is RL. 720 m. There is a good depth of soil (1ft to 3ft).

5. Rainfall & Temperature

The annual rainfall varied from 1200 mm to 1500mm. The maximum rainfall is received during the rainy season from July to September. The average temperature varied from 13.5°C minimum in December to 45° C maximum in May.

6. Objective of the scheme

The main objective of the present scheme is to (I) increase vegetation through taking up bald hill plantation, (ii) clearly demarcating the area with posting up RCC pillars(iii) enforcing protection measures by involving people around under JFM and (iv) above all checking soil erosion and run off which will go in combination for enrichment of the vegetation and soil and building up ecosystem. The total 26.443 ha shall be covered under Bald hill plantation with 1600 plant/ha.

7. Items of work to be taken up

To achieve the above objectives, the following items of work are mainly prescribed to be taken up with the full involvement and co-operation of local villagers.

7.1. Survey and Demarcation

The boundary should be surveyed clearly by the User Agency with reference to the village maps and demarcated by posting R.C.C pillars of size 1.25 m x 20 cm x 20 cm, which shall be embedded at every corner / turning points of boundary line. The RCC pillars shall be embedded 0.625 m deep in to the ground with a foundation of 50 cm x 40 cm in C.C. Top of the pillar shall have a slanting cut facing outside the area for numbering the pillars which will be done in the same sequence as done in the map. Numbering should start from North-Western Corner and proceed in a clockwise direction. The distance between the corner points forward and back ward bearing of each point, its GPS reading and the perimeter of the area to the afforested is given in ***Annexure-III*.**

7.2. Bald Hill Plantation

The total allotted area shall be covered by Bald hill Plantation. Plantation over the area shall be taken up in grid pattern at a spacing of 2.5m x 2.5m. taking care of existing forest crops, if any.

Care should be taken to select only indigenous species as far as possible keeping in view of the existing natural vegetation in and around the area and the climatic and edaphic factors. The choices of species are as follows:

Local Name	***Scientific Name***
Amla	Emblica officinalis
Khair	Acacia catchu
Karanja	Pongomiapinnata
Teak	Tectonagrandis
Sisoo	Dalbergiasisoo
Neem	Azadirachtaindica
Arjun	Terminalia arjuna

In the peripheral area of the site, which is susceptible to grazing may be planted with non-browsable species like Teak, Karanja etc.

The soil being eroded and lack of humus,it is proposed to take up pitting with a pint size of 30cm x30cm x 30cm at spacing of 2.5m x2.5m during February / March for allowing weathering of the soil.It is advisable to use an "A" frame for alignment of the pitting line along the contour. The planting should be taken up only with 8-month-old seedlings having height more than 45 Cm.The size of P. bags will be 5inch x 9-inch x 160g with desired quantity of inputs. The seedlings will be graded and sorted at regular intervals to make those healthy and sound and avoid root coiling. Species like Kusum, Mahul, Amla, Karanj, Neem, Asan, Teak, Jack fruit and specially Mango in more number shall be planted which will help the tribal of MunderiParoja to collect the NTFP items for their livelihood and socio-economic uplifting.

Staggered trenches of size 2 mt x 50cm x50 cm should be dug in between the planting rows at an interval of 2.0 m along the contour, and the excavated earth are piled on the downhill side to form a bound. The staggered contour bound should be stabilized with turf if necessary. The staggered contour trenches will not only arrest, soil conserve moisture and micronutrient for the planted saplings. It will impede the velocity of runoff and will be helpful in feeding ground water to the plants below it. If necessary, half-moon shaped trenches may be created at sloppy terrain for the same purpose on or before 2nd weeding.

7.3. Development of Nursery

A good nursery is the per-requisite for a successful plantation. Therefore, all care should be taken to rise healthy and sound seeding of required sizes before they are put to the plantation site. The site being subjected to different biotic interference, it is proposed to raise 8-month-old seedings for plantation. In case of Bamboo and Teak pre-sprouted seedling from rhizomes and stumps should be raised for plantation purpose. Accordingly, the nursery programmed can be planned out one year in advance. The two years seedling to be raised in poly bags of 5-inch x 9-inch x 160g and one-year old manual should be taken up at all stages of nursery operation so that a good stock of healthy seedling can be raised. 10% extra seedlings should be raised to cover the short fall due to casualty in nursery stage. In case of all the seedlings, shifting,

grading of polythene bags should be done from time to time does not allow the tap roots to strike the ground. Nursery site should be selected, preferably near to plantation site and in a well-drained locality having water sources.

7.4. Planting

The best time of planting of the potted seedling is soon after the onset of regular monsoon or after a good shower of rain. Before planting, the pits are to be prepared by putting mixture of half cubic feet of alluvial soil. Basal dose of 30 gram of NPK fertilizer and 5 gram of Aldrin dust or Phorate pesticide are to be applied to the pits before planting as basal dose. The excavated earth from the pits already weathered and free from stones should be filled in the pits. Before removal of the plants from the Nursery the following precaution should be taken:

Roots escaping from the container should be trimmed.

i. Pots containing the plant are watered, if necessary.

ii. Maximum care should be taken at the time of transportation and handling of seedling so that the ball of earth of the poly pots does not get disturbed and the primary leading shoots are broken. Manual transportation should be given preference.

Planting should be taken up on rainy/cloudy days by adopting all standard techniques of plantation. As far as possible, Bamboo should be put as a fourth plant in the row and planting up other species should be mixed with poly culture design.

Casualty of seedlings occurs due to various caused like heavy rains, drought, fire, grazing etc. But in a well-managed plantation, where the planting stock consists of healthy and stout seedlings, say, about 5% may die during the period between planting and 1st weeding. Seedlings to be used for casualty replacement should be earmarked and kept reserved at the time of planting. Only healthy and stout seedlings slightly larger than those planted at the time of operation should be used. This is important because only such seedlings can catch up growth with those that have survived and are growing. Before planting for casualty replacement, the following operations are to be taken up:

a) The failure pit is to be dug again
b) Another dose of fertilizer, and insecticide should be given to the pit
c) If the casualties are due to white ant attack. Little more quantity of phorate pesticide may be applied to the pit.
d) If the casualties are due to water logging and wilting, care should be taken to drain out the pits by making small channels to downhill side.

Casualty replacement can also be taken up in the 2nd year formation and this time should not exceed 20%.

7.5. Weeding, Manuring & Soil Working

To improve and enhance the growth of plants, it is necessary to see that the plants get as much nutrients as for as possible and that no other wild plants are contesting for space, light and nutrients. Therefore, weeding and soil working must the undertaken in a newly established plantation. Weeding consist of loosening soil around the plant with a hoe oar even with a pick-axe and pulling out all unwanted growth along with their roots, rhizomes, stools etc., while doing so, care should be taken to see that the root system of the planted seedling is not damaged. Weeds within a radius of 0.5 meters around the plant should be removed. Under the prevailing conditions, two weeding are considered sufficient, the first to take place a few weeks after the main plantation is over, say, in August and the second weeding in early winter, i.e., in October or November, Strip weeding which involves cutting of weeds flush to the ground may be confined to the place in between the planted lines. The cut material may be placed along the contour between two rows of plantations, which will ultimately help in conservation of soil and moisture. Soil working is equally an important operation and it should be carried out at the time of each weeding. While loosening the soil, it is important to see that the soil is not pulverized but left in clods. This not only helps in improving soil erosion but also helps in moisture conservation by breaking soil capacity.

The best time for application of fertilizer is at the time of soil working and weeding. In organic fertilizer like NPK @50gms/plant shall be applied at the time of soil working. Chemical fertilizer should not be placed too close to the plants as it may burn the roots and kill the plants. A small dose of urea @20gm/plant may be applied by crowbar hole method before 1st weeding, if possible, for root penetration and growth of seedlings.

It is advisable to apply fertilizer on a rainy day soon after the weeding has been completed.

7.6. Mulching

Mulching is an operation where cut vegetative materials are placed around planted seedling covering the soil around it. This helps soil climate to considerable extent from desiccation. Mulching affects soil temperature, helps condensation, and prevents soil erosion and loss of soil moisture through evaporation. Further, it is to be carried out at the time of 2nd weeding. Weeds which have not lowered may be pulled out from around the planted seedlings and may be used as mulches around the seedlings.

a) They allow the plants to be healthy and stout and have knot free stems.
b) It reduces fire hazards by lessening the chance of ground fire.
c) The plants will be straight with clear bole.

The detailed cost estimate of various operations to be taken up in bald hill plantation (1600 seedlings) mode has been detailed below.

7.7. Peoples participation

It is experienced that; no scheme shall be effective if the local villagers are not involved in the implementation of the scheme itself. The villagers who are having a right on the NTFP items in the adjoining forest area are to be associated with the implementation of the scheme at all different levels. For that, Van SamrakhyanaSamittee (VSS) is proposed to the guidelines of the Government of Odisha issued on 3rd July'1993, the villagers are to be motivated and inspired and above all, explained the benefits they will be getting if plantation is protected by them.

7.8. Monitoring and execution

The scheme will be executed by the Forest Department and shall monitored from time to time by responsible officers including DFO. Nursery, plantation journal and other relevant documents shall be maintained as per the provision of the Plantation Manual. A plantation shed with drinking water facilities may be constructed at the site for execution of different works and from future protection point of view.

7.9 Total cost of the project

The total cost of the project will be **Rs. 1,76,47,230.00** as detailed below, which will be deposited in an account as per the direction of the DFO in favor of State CAMPA, Odisha.

COST ESTIMATE FOR BALD HILL PLANTATION OF 1600 SEEDLINGS/HECT. AT 2.5M x 2.5M SPACING

1	Name of the Plantation.	Bald hill Plantation.
2	No. of seedlings to be planted.	1600 Nos. per hect.
3	Spacing to be adopted.	2.5m x 2.5m
4.	Size of pits.	30cm x 30cm x 30cm
5	Wage rate.	**Rs.298.00** per man-day.
6.	Species to be planted.	**Amla, Khair, Karanja, Teak, Sissoo, Neem and Arjun**
7.	**The user agency will pay the enhanced wage rate as and when required**	

ESTIMATE FOR BARBED WIRE FENCING

(To be undertaken by Kalahandi South Forest Division before taking up plantation activities)

1. 0102 Ply barbed wire (5 Rmt per kg)
   7 straight strand x 100 Mt = 7000 Mt
   2 Diagonal strand =2 X √(6.5')^2 +(8.2')^2=2 x10.50 ft
   =21 ft x 400 nos =8400 ft or = 2560 Mt

   Total = 9560 Mt
   Requirement of Barbed wire per akam
   Cost per KM= 9560/5 =1912 Kg @80/kg **= 1,52,960.00**

2. Construction of RCC Pillars of size:
Length =8 ft, Bottom width =6”x6”, Top width =4”x4”
Reinforced with 6mm rods with proper curing
[{8' x (6” + 4”/ 2)}X (6” + 4”/ 2)] **=** 1.34 cft or 0.038 cum

i) Cost of c.c work 1:2:4 =0.038 cum @5262.57/cum = 199.98
ii)Cost of rod including cutting, bending & binding
=0.038 x 0.9 qtl =0.0342 qtl @Rs.10,595.80/qtl = 362.38
iii)Contingency (15%) including Curing, stacking,
provision of hooks, etc. **=** 81.05

Total = 643.41 or 644/-

Requirement of Pillars per Km:
Spacing = 2.5 mt x 2.5 mt
Requirement = 1000 mt / 2.5 mt = 400 nos.
Strut pillar in every 10th pillar = (400/10) x2 = 80 nos.

Total = 480 nos.
Cost of pillars PER Kilometer =480 @644/- **= Rs. 3,09,120.00**

3. Fitting fixing of RCC pillars in position with hbg metal (4cm) in C.M (1:4:8)
(i) Digging of pits 1.5' x 1.5' x 1.5' =3.375 cft/pit
for 480 pits, 480 x 3, 375= 1620 cft or 45.86 cum @ 12,040 / 100 cum = 5521.54
(ii) Fixing of pillars with 4 cm hbg metals in C.M 1:4:8
pit size 1.5' x 1.5' x 1.5' = 3.375 cft
Deduct 1/3 of butt of pillar i.e 3.375/3 = (-)1.125cft

Total c.c work per pillar 2.25cft

for 480 pillar = 480 x 2.25 = 1080 cft or 30.577 cum @ Rs. 3629.46/cum =**Rs. 1,10,978.00**

4. Labour for straightening the barbed wire and fixing and clipping with pillars
70 M.d per km@298/- **=Rs. 20,860.00**

5. Carriage of Barbed wire & pillars to work site
@ Rs.1000/tl. And cost of loading and unloading within 5km distance approximately
10 ltd @800/ltd **= Rs.18000.00**

6. Provision of one Iron gate of size (4' x 5') on LS **= Rs.7500.00**

Total **= Rs. 6,24,940.00**

Labour cess 1% = Rs. 6250.00

Expenditure per 1Km of barbed wire fencing
or say, Rs.629.91- or Rs.630/- per meter **=6,31,190.00**

7. Expenditure towards maintenance for 3 years (3^{rd} ,6^{th}& 9^{th} year)
@2% of cost per km =3 x 2% x Rs. 6,31,190/- **= Rs. 37,871.00**
Expenditure per 1 Km of barbed wire facing including maintenance **= Rs. 6,69,061.00**

so, expenditure per running meter for fencing =Rs. 669.06/mt. Or say Rs. 669/-mt.
(Six hundred sixty-Nine rupees only

COST NORM FOR BALD HILL PLANTATION @ 1600 PLANTS PER HECTARE (Labour cost@ Rs.298/-per manday)						
Sl. NO.	**Item of Work**	**Preferable period for execution**	**Man day**	**Labour Cost (in Rs.)**	**Material Cost (in Rs.)**	**Total Cost (in Rs.)**
PREPARATORY OPERATION (OTH YEAR)						
1	**Survey and demarcation**	**June**	**2**	**596**	**0**	**596**
2	**Fencing** (I) For an average of 126 meters/ha@Rs.76 19/-per meter for bamboo twigs and bamboo thorn fencing (L:M=40:60)	**June-Sept**	**19**	**5662**	**4280**	**9942**
	(ii) To be strengthened by planting of bamboo and other seedlings in two rows. Bamboo to be planted at 2 meters spacing in staggered manner on the two rows, and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2m apart. Thus 500 plant (125 bamboo and 375 others) to be planted in two rows to cover 126 m of periphery/Ha by the vegetative fence (Bamboo seedlings@ Rs 12.43 per seedling X 125 = Rs 1553.75, Agave seedling @Rs 4.90 per seedling X 375 Rs.1837.5)	**June-Sept**	**11**	**3278**	**3391.25**	**6669.25**
3	Pitting (1600 per ha) each pit-45 cm3	**Nov-Dec**	**128**	**38114**	**0**	**38114**
4	**Soil and water conservation measures** (a) Staggered trench along the contour @ 300 per ha (2.5mx0.5 m x0.5m); digging of percolation pits @ 600 per ha in lieu of staggered trenches, gully plugging and Drainage line treatment half moon trench on the uphil side of each planting pit (100 MD for staggered trench/percolation pits and 30 MD for gully plugging. drainage line treatment and half moon trench)	**Sept-Nov**	**130**	**38740**	**0**	**38740**
	(b) Site clearance-8 MD, alignment and staking of contour lines on ground, planting pits, contour trenches/percolation pits and check dam sites, elc-2 MD	**July-Aug**	**10**	**2980**	**0**	**2980**
5	Raising of seedlings in poly bags (minimum 60 cm high)@ Rs. 12.43- seedling (Rs 8.67 in 0th year Rs.3.76) Part (1760 saplings to be raised for one hectare)	**Oct-March**	**44**	**13112**	**2939**	**16051**
	Total 0th Year		**344**	**102512**	**10610.25**	**113092.3**
6	Monitoring& Supervision charge 5 % of the total cost					**5654.613**
	GRAND TOTAL		**344**	**102512**	**10610.25**	**118746.9**
PLANTING OPERATION (1ST YEAR)						
1	Cost of sapling (balance) from April-June/July @Rs.3.76 per seedling for 1760 seedlings	**April-June**	**21.5**	**6407**	**593**	**7000**
2	Freshening of pits -64 MD, filling with fertile soil and farm yard manure (FYM)-24 MD, application of insecticide and planting of 60 cm tall saplings including carriage of plants- 21 MD	**June-July**	**109**	**32482**	**0**	**32482**
3	Cost of Fertile Soil 0 25 cft @ Rs 8 per cft/FYM 0.25 cft @ Rs. 15 per cft per pit		**0**	**0**	**9200**	**9200**
4	Sowing of seeds on dug out earth of trench	**June**	**6**	**1788**	**200**	**1988**
5	Carriage -6 MD, Planting including Casuality replacement-6 MD 6 June 4 10 July-Aug 36 fertilizer application- 5 MD, 1st weeding-7 MD, 2nd weeding -5 MD soil working- 7 MD	**July-Aug**	**36**	**10728**	**0**	**10728**
6	cost of Fertilizer and insecticide (Granular Insecticide @5 gms/plant @ Rs 80/- per kg Rs 640.00, NPK 100 gms/plant in two doses @ Rs 24 per kg- 3840		**0**	**0**	**4480**	**4480**

7	Repair and maintenance of bamboo fence including material cost	**Aug-Oct**	**15**	**4470**	**2540**	**7010**
8	Maintenance of soil and Moisture Conservation measures (20% of cost)	**Oct-Dec**	**26**	**7748**	**0**	**7748**
9	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**30**	**8940**	**0**	**8940**
10	Fire tracing and control, display board construction painting / 10 writing, other miscellaneous cost	**Jan-Feb**	**10**	**2980**	**360**	**3340**
	Total Cost (1st Year)		**253.5**	**75543**	**17373**	**92916**
11	Monitoring& Supervision charge 5 % of the total cost					**4645.8**
	GRAND TOTAL		**253.5**	**75543**	**17373**	**97561.8**
MAINTENANCE OPERATION (2ND YEAR)						
1	Casualty replacement- 6 MD including seedling cost @Rs.12.43 per seedling and its transportation	**June-July**	**10**	**2980**	**1988.8**	**4968.8**
2	Soil working- 7 MD 1st weeding-6 MD 2nd weeding-6 MD and 23 6440 Aug-Oct 2 fertilizer application 4 MD	**Aug-Oct**	**23**	**6854**	**0**	**6854**
3	Cost of fertilizer 50 gms NPK per plant @ Rs 24/-per kg for 1600 plants =Rs 1920.00 Insecticide @5 gm per plant for 160 nos of plants @ Rs. 80 per KG =Rs. 64.00		**0**	**0**	**1984**	**1984**
4	Repair and maintenance of bamboo fence including material cost	**Aug-Oct**	**15**	**4470**	**2540**	**7010**
5	Maintenance of Soil and Moisture Conservation measures (20% of cost)	**Aug-Oct**	**26**	**7748**	**0**	**7748**
6	Fire tracing and control and other miscellaneous cost	**Feb-March**	**10**	**2980**	**0**	**2980**
7	Closure to grazing fire and other biotic interference by engaging watch and ward	**April-March**	**30**	**8940**	**0**	**8940**
	TOTAL 2nd Year		**114**	**33972**	**6512.8**	**40484.8**
8	Monitoring& Supervision charge 5 % of the total cost					**2024.24**
	GRAND TOTAL		**114**	**33972**	**6512.8**	**42509.04**
MAINTENANCE OPERATION (3RD YEAR)						
1	Repair and maintenance of fence-15 MD/ (in case of barbed wire fencing Rs.9000- for repair), SMC measures (Renovation)-26 MD and maintenance of plantation-14 MD as per requirement	**April-March**	**55**	**16390**	**500**	**16890**
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 3rd Year		**73**	**21754**	**500**	**22254**
3	Monitoring &Supervision charge 5 % of the total cost					**1112.7**
	GRAND TOTAL		**73**	**21754**	**500**	**23366.7**
MAINTENANCE OPERATION (4TH YEAR)						
1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (5TH YEAR)						

1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (6TH YEAR)						
1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (7TH YEAR)						
1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (8TH YEAR)						
1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (9TH YEAR)						
1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**
MAINTENANCE OPERATION (10TH YEAR)						

1	Repair and maintenance of fence-13 MD/ no maintenance in case of barbed wire fencing, SMC measures- 21 MD and maintenance of plantation-14 MD	**April-March**	**48**	**14304**	**500**	**14804**
2	Closure to grazing fire and other biotic interference by engaging watch & ward	**April-March**	**18**	**5364**	**0**	**5364**
	TOTAL 4th Year		**66**	**19668**	**500**	**20168**
3	Monitoring &Supervision charge 5 % of the total cost					**1008.4**
	GRAND TOTAL		**66**	**19668**	**500**	**21176.4**

ABSTRACT

Sl. NO.	**Year**	**No. Person Day**	**Labour cost @Rs. 298/- per day**	**Material cost (in Rs.)**	**Monitoring &Supervision charge 5 % of the total cost**	**Total Cost (in Rs.)**
1	0^{th} year	**344**	**102512**	**10610**	**5654.613**	**118776.6**
2	**1^{st} Year**	**253.5**	**75543**	**17373**	**4645.8**	**97561.8**
3	**2^{nd} Year**	**114**	**33972**	**6513**	**2024.24**	**42509.24**
4	**3^{rd} Year**	**73**	**21754**	**500**	**1112.7**	**23366.7**
5	**4^{th} Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
6	**5th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
7	**6th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
8	**7th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
9	**8th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
10	**9th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
11	**10th Year**	**66**	**19668**	**500**	**1008.4**	**21176.4**
	Total	**1246.5**	**371457**	**38496**	**20496.15**	**430449.2**

In case of Bald Hill Plantation, the hills having more than 30 % slope will qualify for Bald Hill Plantation norm. In remaining areas of the hill, cost norm for normal plantation 1600 plants per hectare will be applicable. In case of highly refractory sites having rocky out crop having less than 30 % slope , the concerned CFs/RCCFS UC circle will have to certify specifically about the Bald Hill characteristics of the site. In case of high hills, the upper portion may quality for Bald Hill Cost Norm and the foot hill with normal soil depth may be taken up at per with norms applicable for normal plantation. But the provision of fencing Bald Hill Plantation Norms will be available for the entire plantation in such case also.

Abstract of the cost required for Compensatory Afforestation

1	Barbed wire fencing around non-forest land over 2.1km with 10-year Maintenance **@ Rs. 6,69,061.00/KM**	Rs. 1,40,5,028.1
2	Bald Hill Plantation over 26.444 ha of non-forest land: 430450 X 26.444	Rs. 1,13,82,819.8
3	**Sub Total**	**Rs. 1,27,87,847.9**
4	15% of the Total plantation cost towards Entry Point Activity / Incentive to VSS	Rs. 19,18,177.185
5	**Sub Total**	**Rs. 1,47,06,025.09**
6	Add Escalation Cost (20%)	Rs. 29,41,205.017
7	Total	**Rs. 1,76,47,230.1**
	Grand total	**Rs. 1,76,47,230.00**
(Rupees One Core Seventy-Six Lakh Forty-Seven Thousand Two Hundred Thirty Only)		