

Land Suitability Certificate

This is to certify that 48.0 Ha. of degraded Reserve Forest land in 1 no. of Bankamunda RF(Extension) patches under Daspalla & Gania Range in Nayagarh Forest Division is identified for Compensatory Afforestation and found suitable for plantation from management point of view. No plantation has been carried out in the aforesaid area previously.


Divisional Forest Officer
Nayagarh Forest Division

**Draft scheme for Compensatory Afforestation
over 48 ha. of degraded Reserve Forest land
in Bankamunda RF (Extension)
under Gania Range of Nayagarh Forest Division
in lieu of diversion of 23.983 ha.
of Revenue Forest land for construction
of 220 KV LILO line
of
Odisha Power Transmission Corporation
(OPTCL) under Dasapalla Tahasil of Nayagarh
District, Odisha.**

**Odisha Power Transmission Corporation
(OPTCL)
At- Sanakushasthali, P.O.- Badakushathali,
Berhampur, Dist.-Ganjam, Odisha-760007**

1. Compensatory Afforestation is one of the most important requirement/condition stipulated by Ministry of Environment, Forest and Climate Change (MoEF & CC), govt. of India while approving proposal for diversion of forest land for non-forest use. The purpose of Compensatory Afforestation (CA) is to compensate the loss of "Land by Land" and loss of "Trees by Trees". An area of 23.983 ha. Revenue forests under 16 villages of Dasapalla tahasil of Nayagarh district are required to be diverted for construction of 220 KV LILO line from existing Meramundali-Bhanjanagar (LOC 246-247).

The instant proposal is a **linear** one stretching over a length of about 31.426 KM with ROW 35 meter width and maximum sag & swing of conductors to be 4.6m passing through the revenue forests as narrated above.

Therefore, in pursuance to MoEF guideline and clarifications vide F. No. 5-2/2017-FC. Dt. 28.3.2019 this CA scheme is prepared based on **"special Provisions for CA for certain categories of project", i.e. para 2.5 (i) 'a' of the guideline (Annexure-I)**. Accordingly this CA scheme is being prepared on "degraded forest land twice the extent of forest area diverted". Total forest area proposed to be diverted is 23.983 ha. and therefore, CA can be raised in $23.983 \text{ ha.} \times 2 = 47.966 \text{ ha.}$ or 48 ha. of degraded forest land having canopy density below 40 percent.

Besides as it is a proposal for Transmission, the user agency also propose to prepare detailed scheme for creation and maintenance of plantation of dwarf species (preferably medicinal plants) in the right of way under the transmission line in consultation with State Forest Deptt. at the time of compliance of Stage-I conditions of the instant proposal. Both CA and the above plantations can compensate the loss of forests by forests as per the guideline of CA.

In view of the above 48 ha. of degraded forest land have been identified at Bankamunda RF (Extension) in Gania Range of Nayagarh Division. The identified site have been inspected by RO/Fr., Gania and the user agency and demarcated in the field (Plate-I) by DGPS survey. A lump sum amount of Rs. 3,00,000/- has been provisioned in the scheme to post required size pillars inscribing pillar no., geo-coordinates etc. at the time taking up plantation in the field with reference to the coordinates furnished in the map.

In course of site inspection by the RO/Fr., Gania range with the assistance of team of Grow Green Consortium, consisting of Rtd. Forest Officers, it was ascertained that the site is suitable for ANR (Aided Natural Regeneration) with gap plantation of indigenous, drought hardly species. Gap plantation shall be taken up in gaps @ 200 plant/ha. on an average. The existing degraded vegetation shall be silviculturally tended including high stump cutting, singling of pollard shoots, climber cutting etc. as per Govt. approved cost norm.

2. **Existing vegetation :**

Bankamunda RF falls under dry deciduous type of forests. The vegetation constitute mainly Sal (*Shorea robusta*), Mahula (*Madhuca indica*), Asan (*Terminali tomentosa*), Chara (*Buchanania lanzan*), Kendu (*Diospyros embryopteris*), Rohini, Piasal (*Pterocarpus marsupium*), Dhaura (*Anogeissus latifolia*) etc. in degraded condition. Climbers like Siali (*Bahania villi*), Dantari (*Acacia sinuate*), Dhatki (*Woodfordia fruticosa*), Satabari (*Asparagus racermosa*) and shrubs like Khajure, T.Kurum, Kaintha.

Canopy density is around 30%

Due to uncontrolled grazing and repeated annual fire the forest have been degraded on the slopes partly and therefore, allotted to **rehabilitation working circle** in the current working plan of Nayagarh Division with a view to rehabilitate and restock the areas by appropriate silvicultural operations to the existing species and fillup the gaps by way of gap plantation consisting of indigenous, drought hardy species with protection measures supported by VSS on JFM mode.

3. **Topography and soil :**

The proposed site in Bankamunda RF (Extension) is partly hilly, undulating with gently slope. The elevation varies from 200m to 300m the mean sea level. The foot hill of the site is somewhat plain with good depth of soil. The slope is towards South-East direction. A number of seasonal nalas occur inside the site & which drain the surface run off in to perennial nalas like Barha nala and other those ultimately drain to river Mahanadi. So to say the site actually serve as the catchment area of river Mahanadi.

The soil is red-alluvial in nature on the slopes and hill top mixed with stones and pebbles. However the foot hill contains loamy and alluvial soil.

4. Climate :

The area experiences sub tropical climate characterised by hot summer and cold winter. Maximum temperature during summer months rises to 44^o Celsius and minimum goes down to 16^o Celsius during winter. The area gets moon soon rains during 2nd fortnight of June and continues up to last week of September and 1st week of October. Of course low pressure rain also occur during October at times. The average rainfall is between about 140 mm. & 408 mm.

5. Objective of the scheme :

- i. To compensate the loss of forest to the extent of 23.983 ha. and to keep over all forest areas in tact as per provision of F.C Act, 1980 and rules framed there under.
- ii. To afforest the area identified for Compensatory Afforestation, with suitable species, especially indigenous ones, with a view to improve the bio-diversity status of the locality.
- iii. To improve the micro-edaphic condition of the site by undertaking suitable soil and moisture conservation measures.
- iv. To protect the area against encroachments, fire and grazing etc. so as to arrest further degradation of the site.
- v. To provide employment opportunity to the local people, mainly SC/ST population.
- vi. To involve the local villagers in protection and maintenance of the plantation and the forests.
- vii. To manage and protect the plantation and the adjoining forests on JFM mode involving the VSS members from the inception of this project.
- viii. To fulfil requirement of fuel wood and small timber of local communities.
- ix. To provide a green clothing to the area by means of artificial regeneration or plantation in order to reduce soil erosion and to save the catchment area of river Mahanadi.

6. Work Schedule :

- i. The site of 48 ha. of RF land is to be re-demarcated in the field according to the coordinates as furnished below and required size RCC pillars to be posted at survey stations. It will be wiser to post required size pillars along the RF boundary where ever missing and small pillars inside the RF area. The pillars are to be coloured and numbered serially inscribing the GPS coordinates on the face. The entire boundary line of the area are to be cleared at a width of 2 meter or so leaving aside the forest species. The geo coordinates of the boundary of the identified site in Bankamunda RF (Extension) is furnished below.

Sl. No. of Pillar	Latitude	Longitude
1	20°23'46.89996"	84°54'59.00004"
2	20°23'42.10008"	84°55'01.09992"
3	20°23'39.99984"	84°55'04.69992"
4	20°23'40.20000"	84°55'08.60016"
5	20°23'49.04664"	84°55'19.63992"
6	20°23'49.12368"	84°55'19.80336"
7	20°23'50.98740"	84°55'22.16640"
8	20°23'51.44064"	84°55'22.62792"
9	20°23'52.17432"	84°55'23.11248"
10	20°23'53.45232"	84°55'23.70000"
11	20°23'55.70016"	84°55'23.70000"
12	20°23'57.90012"	84°55'21.10008"
13	20°23'59.49996"	84°55'20.39988"
14	20°24'01.10016"	84°55'20.20008"
15	20°24'04.20012"	84°55'19.80012"
16	20°24'05.60016"	84°55'18.09984"
17	20°24'07.09992"	84°55'15.89988"
18	20°24'09.90000"	84°55'14.09988"
19	20°24'10.80000"	84°55'12.00000"
20	20°24'11.00016"	84°55'08.60016"
21	20°24'11.09988"	84°55'05.80008"
22	20°24'09.90000"	84°55'05.00016"
23	20°24'08.79984"	84°55'04.59984"
24	20°24'06.99984"	84°55'04.59984"
25	20°24'05.10012"	84°55'04.90008"
26	20°24'02.09988"	84°55'04.10016"
27	20°24'01.40004"	84°55'02.60004"
28	20°24'00.90000"	84°55'01.20000"
29	20°24'00.39996"	84°54'59.79996"
30	20°23'59.39988"	84°54'57.30012"
31	20°23'56.50008"	84°54'55.40004"
32	20°23'55.10004"	84°54'56.09988"
33	20°23'52.90008"	84°54'58.60008"
34	20°23'50.70012"	84°54'59.69988"

- ii. It is proposed to take up **regeneration cleaning** at the site by high stump cutting (preferably sal, mahula, asan & chara and other valuable species etc.), singling of pollard shoots where ever available, climber cutting, weeding etc. in the 0th year. There after pruning to be done to the prominent singled out shoots and singling out of shoots sprouting from the cut high stumps wherever available according to ANR model and basing on the Govt. approved cost norm.

iii. **Protection of plantation & regeneration cleaning area.**

As suggested by the local Forest guard it is proposed to protect the plantation & cleaning area by strong brush wood fencing with the help of spitted bamboo & thorns, bamboo kanika all around the site over a length of about 2.921 KM. The fence shall be maintained for period of three years. Cost estimate for fencing around 48 ha. area in enclosed are **Annexure-II** which have been prepared from the approved cost norms 2019 in Annexure-7 prescribed for block plantation. Total cost of fencing with three year maintenance proposed to be **Rs. 20,09,648.00**.

Watch & ward through temporary watchers deputed by the concerned VSS i.e. Gohiramada shall be engaged to protect the plantation and casual maintenance of fence where ever required. Besides the concerned VSS shall be motivated through entry point activity not to allow cattle grazing there up to three years. They should also create awareness in the neighbouring villages from where cattle use to graze at the site usually, not to set free their cattle in to the plantation.

7. **Choice of species** : Indigenous, and drought hardy, and light demander species, preferably growing at the locality are to be selected for planting purposes. Besides the following species may be planted at the site.

1. Amla – *Emblica officinalis*.
2. Neem – *Azadirachta indica*.
3. Bahada – *Terminalia belerica*.
4. Chhatian – *Alstonia scholaris*.
5. Kurum – *Mitragyna parviflora*.
6. Salia bamboo – *Dendrocalamus strictus*.

Other fodder species as would be available locally can also be planted from wildlife grazing point of view.

8. **Plant population** : It is proposed to fill up the gaps at the site @ 200 plant/ha. Large gaps devoid of natural forest species shall be planted at a spacing of 2.5m x 2.5m and small gaps without any spacing i.e. at random & in staggered manner. Total plants to be planted comes to 48 ha. x 200 = 9,600 nos.

9. **Raising of nursery** : Saplings required for gap plantation will be raised in temporary nursery nearer to the planting site at village Gohiramada. Nursery works will be started during 0th year of plantation from January to March to get good quality tall one and half feet size saplings in 13" x 13" size P. bags following standard nursery practices as per the Govt. approved cost norm 2019 (**Annexure-III**).

10. **Alignment stacking & pitting** : The plantation shall be done in small & large gaps surrounded by existing natural species, a standard spacing cannot be done as in case of block plantation. However, in large gaps more than one acre void of any forest growth spacing shall be adopted as 2.5m x 2.5m. In other sites it should be done in staggered manner as far as possible to cover the blanks. Therefore, while field visit the blanks are to be identified and accordingly stacking to be done to locate the planted saplings for silvicultural operation.

Pitting of size 45cm x 45cm x 45cm shall be dug all over the site during 0th year (November-December) and as suggested by RO, Gania fertile soil 0.250 cft. & FYM 0.25 cft. well mixed shall be added to each pit before planting i.e during April-May for proper weathering. Details cost estimate for application of fertile soil and farm yard manure to the pits is enclosed as **Annexure-IV**. The estimate have been prepared basing on approved cost norms of PCCF, Odisha in Annexure-13 (Page -13) of plantation cost norm 2019. Total cost for application of fertile earth and FYM for 9,600 plants proposed to be **Rs. 99,984/-**.

11. **Soil and moisture conservation measures** : As prescribed in Govt. approved Soil Moisture Conservation with LBCD of size (Length 5 Mtr, Height 1Mtr, Top width 1Mtr, Bottom width 7Mtr, Aprone 1Mtr.) of 20 nos. @18358/- per LBCD (Lum -sum). PCCF, Odisha approved cost norm for digging staggered trench as per his cost norm in Annexure-41 (page=131) of plantation cost norm 2019.

However, special provision for gully plugging, check damming etc. are proposed as there are seasonal gullies, rain cut gullies at some places of the plantation site. For this funds to the tune of **Rs. 367160/-** is proposed beyond the approved cost norm to conserve the eroded soil from the slopes there by protecting the natural vegetation

12. **Planting operation (First year)** : Planting operation shall be carried out as per the Govt. approved cost norm (Annexure-9) with treatment of pits by prescribed dose of vermicompost, insecticide, chemical fertilisers, such as urea, NPK etc. before and after planting.

Carriage, planting, casualty replacement, weeding, soil, working & manuring etc. in 0th year, 1st year, 2nd year, 3rd year & 4th year to 10th year shall be done as per prescription of Govt. approved cost norm in Annexure-9 (Page-26 to 29) of plantation cost norm 2019. A revised cost norm with 10th year maintenance on current wage rate is enclosed as **Annexure - V**.

13. **Entry Point activities**

To ensure people's participation in protection and development of the afforested area, it is proposed take up entry point activities in village Gohiramunda in compliance to Govt. Resolution of 1993 and 2011. If required additional Vana Surakhya Samiti (VSS) will be constituted in the adjoin villages, if such committees do not exist, with the help of local staff of Forest Deptt. Plantation and Protection activities will be undertaken in association with the VSS members.

Basing on their cultural and religious sentiments which are ought to be taken care of, incentives on developmental/cultural activities shall be provided to them which will benefit the success of plantation programme. EPA expenses if implemented through VSS @ Rs. 1200/- in 0th year, Rs. 2400/- in 1st year, Rs. 1800/- in 2nd year, Rs. 600/- in 3rd year, Rs. 600/- in 4th year, Rs. 600/- in 5th year, Rs. 600/- in 6th year, Rs. 600/- in 7th year, Rs. 600/- in 8th year, Rs. 600/- in 9th year, Rs. 600/- in 10th year, total Rs. 10200/- per Ha is proposed for the same.

14. **Executing Agency**

The DFO, Nayagarh Division will execute the work by involving the Local VSS. Nursery, Plantation Journals and other relevant documents shall be maintained as per the provision of the plantation manual and shall be kept with the local Forest guard for monitoring and evaluation.

15. **Inspection, Monitoring and Evaluation**

In order to make the Compensatory Afforestation Scheme successful, frequent inspection of the plantation site by the local field staff and officers at the Divisional Level is necessary.

ANNEXURE-IV

FINANCIAL FORCAST (Wage rate Rs. 311.00 per day)

Sl No.	Type of Plantation	Area in Ha.	Cost per ha. in Rs.	Total cost in Rs.
1	ANR gap Plantation using indigenous, drought hardly, fruit bearing (* 5% seedling planted must be Jackfruit and 10% fruit bearing seedlings including Mango, Jamu, Dimiri, Bara & Aswastha) and fodder species @ 200 plants per ha.	48.0	58585.00	2812080.00
2	Barbed wire fencing @ Rs. 688/- over (2921 Mtr.), Maintenance of 3 years including provision of 1 no. Iron Gate (only planting area)	48.0	@Rs.688.00 per Mtr.	20,09,648.00
3	Treatment of pits with fertile earth and farm yard manure before planting proposed considering the side conditions (Annexure-IV). Total 9600 Plants.	48.0 for 9600 plants.	@ Rs.10.415 per pit	99984.00
4	Additional Soil Moisture Conservation with LBCD of size (Length 5 Mtr, Height 1Mtr, Top with 1Mtr, Bottom width 7Mtr, Aprone 1Mtr.) of 20 nos. @18358/- per LBCD (Lum -sum) as per field requirement.	48.0 (Lum –sum 20 nos. LBCD)	@18358 per LBCD	367160.00
	Additional EPA expenses if implemented through VSS @ Rs. 1200/- in 0 th year, Rs. 2400/- in 1 st year, Rs. 1800/- in 2 nd year, Rs. 600/- in 3 rd year, Rs.600/- in 4 th year, Rs. 600/- in 5 th year, Rs 600/- in 6 th year, Rs. 600/- in 7 th year, Rs. 600/- in 8 th year, Rs. 600/- in 9 th year, Rs. 600/- in 10 th year, total Rs. 10200/- per Ha.	48.0	@Rs. 10200/- per Ha.	489600.00
	Cost of Preparation and erection of 01 no. sign board with maintenance of boundary pillar. (LS)	01	100000.00	100000.00
	Watcher shed @ 50000/- (Creation in Panting year) with 9 years maintenance @ 5000/- per year at Six plantation site {50000+ (9x5000)} = 95000/-	01	95000.00	95000.00
	Total			5973472.00
	20% cost escalation			1194694.00
	Grand Total			7168166.00

Annexure-I

F. No. 5-2/2017- FC
Government of India
Ministry of Environment, forests and Climate Change
(FC Division)

Indira Paryavaran Bhawan,
Aliganj, Jor Bag Road,
New Delhi - 110003.

Dated: 28th March, 2019

To,
The Principal Secretary/Secretary (Forests),
All State/UT Governments.

Sub: **Handbook of guidelines for effective and transparent implementation of the provisions of Forest (Conservation) Act, 1980.**

Sir,

In supersession of all guidelines issued in the past, a handbook of guidelines is issued for effective and transparent implementation of the provisions of Forest (Conservation) Act, 1980. All the provisions enshrined in these guidelines will be applicable from 8th March 2019 onwards. The copy of comprehensive guidelines is available on Ministry's website: www.parivesh.nic.in.

This issue with the approval of competent authority.

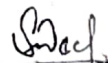
Yours faithfully,


(Sandeep Sharma)

Assistant Inspector General of Forest (FC)

Copy to:

1. Prime Minister's Office, New Delhi.
2. Secretary, Ministry of Mines/Coal/Steel/MoRTH/MoPNG/MHA/MoP/MoTA, Government of India, New Delhi.
3. Principal Chief Conservator of Forests, all State/UT Governments.
4. Nodal Officer (FCA), all State/ UT Governments.
5. All Regional Offices, Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI, New Delhi.
6. Joint Secretary in-charge, Impact Assessment Division, MoEF&CC, GoI, New Delhi.
7. All IGF/ DIGF/AIGF in MoEF&CC, GoI, New Delhi.
8. Sr. Director (Technical), NIC, MoEF&CC with a request to place a copy of the letter on website of this Ministry.
9. PPS to Secretary (EF&CC)/DGF&SS/ADGF(FC)/ADGF(Wildlife), MoEF&CC, New Delhi.
10. Guard File.


(Sandeep Sharma)

Assistant Inspector General of Forest (FC)

o/c
17/4/19

(viii) In case of bifurcation of States, during processing of proposals seeking prior approval of Central Government under the Forest (Conservation) Act, 1980, if the land identified for creation of CA is within the undivided State, and the forest land proposed to be diverted does not fall in the same newly created State, proposals shall continue to be processed without insisting on identification of non-forest land for creation of compensatory afforestation in the State in which the forest land proposed to be diverted is located. In such cases, if Central Government agrees In-principle for diversion of forest land for non-forest purpose, it shall be subject to a condition that amounts realized from the user agency for creation and maintenance of compensatory afforestation shall be transferred from the State with which the money has been deposited to the State in which the land identified for creation of compensatory afforestation is located. In case for some valid and cogent reason, cost of creation and maintenance of compensatory afforestation needs to be revised, additional amount, if any, will be realized from the concerned user agency and transferred to the State where CA is proposed. All other levies realized from the user agency in lieu of diversion of such forest land will however be retained in the State in which the forest land proposed to be diverted is located.

(ix) Non-forest land, not coming under the purview of FC Act, 1980 reclaimed by any user agency by planting native species of a minimum of 1000 trees per hectare and of minimum 10 cm diameter at breast height can be considered as CA in lieu of forest land to be diverted, without levying planting cost. The ownership of the non-forest land identified for the purpose of CA is to be transferred and mutated in favour of the State/UT Forest Department and declared as RF/PF under the Indian Forest Act, 1927 or State Forest Act / Rules / Regulations, before the Stage II approval.

2.5 Special provisions for CA for certain categories of projects:

- ✓ (i) CA shall be raised and maintained at the cost of the user agency on degraded forest land twice in extent of the forest area diverted in the cases of:
- a. Laying of transmission lines;
 - b. Laying of telephone/optical fibre lines;
 - c. Mulberry plantation undertaken for silkworm rearing,
 - d. Diversion of linear or 'strip' plantations declared as protected forest along road/ rail/canal sides for widening or expansion of road/rail/canal,
 - e. Extraction of minor materials from the river beds,
 - f. The projects implemented by the Central Government/PSUs, excluding Central Govt./Central PSUs Projects implemented by/through State Government and State Sector Projects implemented by the Central Government/PSUs
 - g. Construction of link roads, small water works, minor irrigation works, school building, dispensaries, hospital, tiny rural industrial sheds of the Government or any other similar work excluding mining and encroachment cases, which directly benefit the people of the area in hill districts and in other districts having forest area exceeding 50% of the total geographical area, provided diversion of forest area does not exceed 20 hectares.

SCHEME-I

SCHEME FOR ANR WITH GAP 200 PLANT/Ha. FOR COMPENSATORY AFFORESTATION OF 48.0 HA OF DEGRADED FOREST LAND IDENTIFIED IN BANKAMUNDA RF UNDER GANIA RANGE IN NAYAGARH DISTRICT TO ACCOMMODATE 9600 NOS. OF SEEDLINGS IN LEIU OF 23.983 HA. DIVERSION OF FORST LAND FOR THE CONSTRUCTION OF 220 KV LILO LINE FROM EXISTING 220 KV OF BHAJANGAR-MERAMUNDALI DC LINE TO 220/33 KV GRID SUBSTATION AT DASPALLA.

WAGE RATE Rs. 311.00/- PER MANDAY

Vide Notification No. 2816/LC, Bhubaneswar dt. 25.05.2021 of Labour Commissioner, Odisha

ESTIMATE OF COST FOR 1.00HA. UNDER ANR GAP PLANTATION MODEL

Sl. No.	Item of work	Period of execution	Mandays	Labour cost @ 311 per day	Material cost	Total
1	2	3	4	5	6	7
1	Survey, Demarcation & pillar posting. GPS Reading with mapping	Nov/Dec	2	622	0	622
2	Site Preparation	Nov/Dec	2	622	0	622
3	Silvi-cultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	Jan/Feb	5	1555	0	1555
4	Contingency and Unforeseen Expenditures		0	0	133	133
	SUB-TOTAL		9	2799	133	2932
5	Monitoring & Supervision Charges 5% of the total cost					147
	Grand Total		9	2799	133	3079
1ST YEAR OPERATION						
1	Pitting 45 cm cube size	Feb/Mar	9	2799	0	2799
	(a) Transportation of seedlings from permanent Nursery to planting site including Loading, Unloading and watering @ 14000/- per 1000 seedlings at unloading poing	Jul/Aug	0	0	3080	3080
	(b) Shifting to the planting place	Jul/Aug	3	933	0	933
2	(c) planting including casualty replacement	Jul/Aug	5	1555	0	1555
3	Complete weeding, Soil working, Manuring	Aug/Sep	6	1866	0	1866
4	Cost of Vermi compost/ Bio- fertilizer/ Organic fertilizer @ 200gms / Plant @Rs.20/- per kg = Rs. 800 and Pesticide / Bio- Pesticide 5 gms/ plant @ Rs. 80/- per kg. Rs. 80.00			0	880	880
5	Cost of Chemical fertilizer a. DAP 40 gms/ plant in subsequent dose @ Rs. 24/- per kg = 192.00 b. DAP (20gms) @ Rs. 24/- per kg + Urea (40gms) @ Rs. 6/- per kg + MOP (10gms) @ Rs. 16.5/- per kg. Total 70 gms / plant = Rs. 369.00			0	369	369
6	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoots etc.	Sep/Oct	15	4665		4665
7	Soil Conservation Measures (Staggered trenches of dimension 2m x 0.5m x 0.5m @ 60 nos. per ha) or its equivalent	Sep/Oct	20	6220		6220

	Fireline Tracing and Inspection Path	Feb/Mar	3	933		933
	Watch & Ward	Aug/Mar	7	2177		2177
10	Contingency and Unforeseen Expenditures			0	304	304
	SUB-TOTAL		68	21148	4633	25781
11	Monitoring & Supervision Charges 5% of the total cost			0		1289
	SUB-TOTAL PLANTATION		68	21148	4633	27070
	Construction of Watchman shed on L.S (1 No)			0	50000	50000
	Grand Total 1st Year:		68	21148	54633	77070

2nd YEAR OPERATION

1	Transportation of seedlings from permanent Nursery to planting site including Loading, Unloading and watering @ 14000/- per 1000 seedlings at unloading poing	Jul/Aug	0	0	280	280
2	Casualty replacement (10% of the plantation) including cost of seedling, carriage and planting	Jul/Aug	3	933	780	1713
3	Complete weeding and cultural operations	Sep/Oct	2	622		622
4	Soil Working and manuring	Sep/Oct	2	622		622
5	Cost of Fertilizer and Pesticide / Bio- Pesticide : i. Vermi-compost 200gms/plant @ Rs. 20/- per Kg = Rs. 800.00 ii. Pesticide / Bio- Pesticide 5gms/plant for 20 plants 100gms @ Rs.80/-per kg = Rs. 8.00	Sep/Oct	0	0	808	808
6	Soil Conservation Measures (Renovation of staggered trenches etc.)	Sep/Oct	8	2488		2488
7	Fireline Tracing and Inspection Path	Feb/Mar	1	311		311
8	Watch & Ward (Whole Year)	Apr-Mar	7	2177		2177
9	Contingency and Unforeseen Expenditures			0	181	181
	SUB-TOTAL		23	7153	2049	9202
10	Monitoring & Supervision Charges 5% of the total cost			0		460
	SUB-TOTAL PLANTATION		23	7153	2049	9662
11	Maintenance of of Watchman shed 1 No. per year			0	5000	5000
	Grand Total 2nd Year:		23	7153	7049	14662

3rd YEAR OPERATION

1	Transportation of seedlings from permanent Nursery to planting site including Loading, Unloading and watering @ 14000/- per 1000 seedlings at unloading poing	Jul/Aug	0	0	140	140
2	Casualty replacement (5% of the plantation) including cost of seedling, carriage and planting	Jul/Aug	2	622	390	1012
3	Cost of Pesticide / Bio- Pesticide @ 5 gm per plant for 10 plants @ Rs. 80/- per kg	Jul/Aug	0	0	4	4
4	Complete weeding and cultural operations	Aug/Sep	1	311		311
5	Soil Working	Aug/Sep	1	311		311
6	Fireline Tracing and Inspection Path	Feb/Mar	1	311		311
7	Watch & Ward (Whole Year)	Apr-Mar	7	2177		2177
8	Contingency and unforeseen items			0	200	200
	SUB-TOTAL		12	3732	734	4466
9	Monitoring & Supervision Charges 5% of the total cost			0		224
	SUB-TOTAL PLANTATION		12	3732	734	4690

Maintenance of of Watchman shed 1 No. per year			0	5000	5000
Grand Total 3rd Year:		12	3732	5734	9690

4th YEAR OPERATION

1	Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2	Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3	Counting of Survival of Plantation	Dec-March	3	933	50	983
	SUB-TOTAL		6	1866	50	1916
4	Monitoring & Supervision Charges 5% of the total cost			0		96
	SUB-TOTAL PLANTATION		6	1866	50	2012
5	Maintenance of of Watchman shed 1 No. per year			0	5000	5000
	Grand Total 4th Year:		6	1866	5050	7012

5th YEAR OPERATION

1	Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2	Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3	Counting of Survival of Plantation	Dec-March	3	933	50	983
	SUB-TOTAL		6	1866	50	1916
4	Monitoring & Supervision Charges 5% of the total cost			0		96
	SUB-TOTAL PLANTATION		6	1866	50	2012
5	Maintenance of of Watchman shed 1 No. per year			0	5000	5000
	Grand Total 5th Year:		6	1866	5050	7012

6th YEAR OPERATION

1	Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2	Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3	Counting of Survival of Plantation	Dec-March	3	933	50	983
	SUB-TOTAL		6	1866	50	1916
4	Monitoring & Supervision Charges 5% of the total cost			0		96
	SUB-TOTAL PLANTATION		6	1866	50	2012
5	Maintenance of of Watchman shed 1 No. per year			0	5000	5000
	Grand Total 6th Year:		6	1866	5050	7012

7th YEAR OPERATION

1	Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2	Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3	Counting of Survival of Plantation	Dec-March	3	933	50	983
	SUB-TOTAL		6	1866	50	1916
4	Monitoring & Supervision Charges 5% of the total cost			0		96
	SUB-TOTAL PLANTATION		6	1866	50	2012
5	Maintenance of of Watchman shed 1 No. per year			0	5000	5000
	Grand Total 7th Year:		6	1866	5050	7012

8th YEAR OPERATION

1	Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2	Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3	Counting of Survival of Plantation	Dec-March	3	933	50	983
	SUB-TOTAL		6	1866	50	1916

Monitoring & Supervision Charges 5% of the total cost			0		96
SUB-TOTAL PLANTATION		6	1866	50	2012
5 Maintenance of of Watchman shed 1 No. per year			0	5000	5000
Grand Total 8th Year:		6	1866	5050	7012
9th YEAR OPERATION					
1 Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2 Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3 Counting of Survival of Plantation	Dec-March	3	933	50	983
SUB-TOTAL		6	1866	50	1916
Monitoring & Supervision Charges 5% of the total cost			0		96
SUB-TOTAL PLANTATION		6	1866	50	2012
5 Maintenance of of Watchman shed 1 No. per year			0	5000	5000
Grand Total 9th Year:		6	1866	5050	7012
10th YEAR OPERATION					
1 Fireline Tracing and Inspection Path	Feb/Mar	1	311	0	311
2 Watch & Ward and cultural operations	Apr-Mar	2	622	0	622
3 Counting of Survival of Plantation	Dec-March	3	933	50	983
SUB-TOTAL		6	1866	50	1916
Monitoring & Supervision Charges 5% of the total cost			0		96
SUB-TOTAL PLANTATION		6	1866	50	2012
5 Maintenance of of Watchman shed 1 No. per year			0	5000	5000
Grand Total 10th Year:		6	1866	5050	7012
Grand Total Plantation:		154	47894	102899	153585


 Divisional Forest Officer
 Nayagarh Division

ABSTRACT FOR SCHEME-I

No.	Year	No. of person Days	Labour cost @ 311.00 per day	Material cost (Rs.)	Monitoring & Supervision Charge 5% of the total cost	Construction and Maintenance of Watchman shed	Total Cost
1	2	3	4	5	6	7	8
1	0th Year (Advance Year)	9	2799	133	147	0	3079
2	1st Year (Creation Year)	68	21148	4633	1289	50000	77070
3	2nd Year	23	7153	2049	460	5000	14662
4	3rd Year	12	3732	734	224	5000	9690
5	4th Year	6	1866	50	96	5000	7012
6	5th Year	6	1866	50	96	5000	7012
7	6th Year	6	1866	50	96	5000	7012
8	7th Year	6	1866	50	96	5000	7012
9	8th Year	6	1866	50	96	5000	7012
10	9th Year	6	1866	50	96	5000	7012
11	10th Year	6	1866	50	96	5000	7012
	Total:	154	47894	7899	2792	95000	153585
	Total Cost Norm per Ha (Col. No. 4 +5 + 6)						58585
	Construction of watchman shed and its maintenance up to 10 th year (Col. No. 7)						95000
	Total Cost of plantation (48.00 Ha.):						2812080
	Grand Total:						2907080


Divisional Forest Officer
Nayagarh Division

18 month old seedlings (1000 seedlings)

Sl. No	Item of work	Period	unit	Unit cost	Quantity	Labour cost	Material cost	Total
1	2	3	4	5	6	7	8	9
1	Cost of P bags (9" x 5")		Kg	212	2.5	0	530	530
2	Cost of soil		cft	8	22	0	176	176
3	Cost of Sand		cft	12	11	0	132	132
4	Cost of CDm		cft	15	12	0	180	180
5	Cost of insecticide		Kg	80	2	0	160	160
6	Preparation of soil mixture including pulverisation and straining	Nov-Dec	MD	311	2	622	0	622
7	Filling setting	Nov-Dec	MD	311	2	622	0	622
8	Collection of seed, grading and treatment	Dec	MD	311	2	622	0	622
9	Preparation of germination bed, dibbling / transplanting, provision of shed	Jan	MD	311	2	622	200	822
10	Watering from January to March	Jan-March	MD	311	9	2799	0	2799
11	Maintenance onnursery including fencing up to March	Jan - March	MD	311	8	2488	400	2888
12	Watering from April to June	April - June	MD	311	9	2799	0	2799
13	Shorting, Weeding, Grading and resetting	May- June	MD	311	3	933	0	933
14	Application of insecticide	May - June	MD	311	0.25	77.75	0	77.75
15	Contingency				0	0	327	327
Total:						11584.75	2105	13689.75
1	Watering October to March	Oct - March	MD	311	19	5909	0	5909
2	Shorting, weeding, grading and resetting over one year period	Oct-Nov	MD	311	9	2799	0	2799
3	Application of insecticide cost	Nov - Dec	MD	311	0.2	62.2	30	92.2
4	Contingency				0	0	550	550
Total:						8770.2	580	9350.2
1	Polythene bags (12" x 10" x 300 gauge)		Kg	212	12.50	0	2650	2650
2	Cost of soil		cft	8	58	0	464	464
3	Cost of Sand		cft	12	29	0	348	348
4	Cost of CDM		cft	15	29	0	435	435
5	Cost of insecticide		Kg	80	2	0	160	160
6	Preparation of potting mixture including pulverization and straining	January	MD	311	4	1244	0	1244
7	Filling of polythene bags including repotting and setting	March	MD	311	20	6220	0	6220
8	Watering from April to June	April - June	MD	311	10	3110	0	3110
9	Weeding, shifting and grading through out the year	May- June	MD	311	2	622	0	622
10	Application of insecticide	May- June	MD	311	0.5	155.5	100	255.5
11	Contingency	-	-	0	0	0	425	425
Total:						11351.5	4582	15933.5
G.Total:						31706.45	7267	38973.45


 21/09/17
 Divisional Forest Officer
 Nayagarh Division