



By e-mail & Hard Copy

OFFICE OF THE REGIONAL CHIEF CONSERVATOR OF FORESTS, BHAWANIPATNA CIRCLE
Railway Station Road, Bhawanipatna, Kalahandi, Odisha. Email Id: rccf.bhawanipatna@odisha.gov.in

Memo No. 4776 /4F(Misc.)-26/2022 Dated: 31.12.2022

To

The PCCF (FD&NO, FC Act).
O/o the Principal CCF & HoFF, Odisha, Bhubaneswar.

Sub:-

Submission of Site-specific Compensatory Afforestation Scheme over an area of 48.04 Acre equivalent to 19.44 ha. of Non-Forest Govt. Land identified in village **Tarapadar** under Thuamul Rampur Tahasil in Kalahandi district under Kalahandi South Division against **Rantha Iron Ore Mines** of M/s Odisha Mining Corporation Ltd.

Ref:-

Memo No.8040 dtd.27.12.2022 of DFO, Kalahandi South Division addressed to this office & copy thereof endorsed to you vide his next memo of even date.

The Compensatory Afforestation Scheme over an area of 48.04 Acre equivalent to 19.44 ha. of Non-Forest Govt. Land identified in village **Tarapadar** under Thuamul Rampur Tahasil in Kalahandi district under Kalahandi South Division against **Rantha Iron Ore Mines** of M/s Odisha Mining Corporation Limited basing on One Time Cost Norms of the Pr.CCF & HoFF, Odisha along with requisite documents/ maps received from the Divisional Forest Officer, Kalahandi South Division vide his memo under reference is forwarded herewith in triplicate for favour of information and necessary action.

Encl: CA Scheme- 3 (three) Sets.

31/12/2022
I/c Regional Chief Conservator of Forests,
Bhawanipatna Circle.

By e-mail

Memo No. 4777 / dated: 31.12.2022

Copy forwarded to the Divisional Forest Officer, Kalahandi South Division for information and necessary action with reference to his memo No.8040 dtd. 27.12.2022.

31/12/2022
I/c Regional Chief Conservator of Forests,
Bhawanipatna Circle.

By e-mail

Memo No. 4778 / dated: 31.12.2022

Copy forwarded to the Divisional Forest Officer, Bonai Forest Division for information and necessary action with reference to memo No.8043 dtd. 27.12.2022 of DFO, Kalahandi South Division to his address.

31/12/2022
I/c Regional Chief Conservator of Forests,
Bhawanipatna Circle.

Contd...P/2

Su
Joint Secretary (Geo)
Principal Secretary
Odisha Mining Corporation Ltd.
Bhubaneswar

SCHEME FOR
SITE SPECIFIC COMPENSATORY
AFFORESTATION
OVER
19.44 HA OF NON-FOREST GOVT. LAND
IDENTIFIED IN VILLAGE
TARAPADAR
UNDER THUAMUL RAMPUR TAHASIL
IN
KALAHANDI DISTRICT
AGAINST
RANTHA IRON ORE MINES
OF
ODISHA MINING CORPORATION LTD.
(A Govt. of Odisha Undertaking)
OMC HOUSE, POST BOX-34, BHUBANESWAR-1
(ON ONE TIME COST NORM BASIS)

Detailed scheme for Compensatory Afforestation to be carried out in lieu of 268.84 hectares of forest area to be diverted within Rantha Mining Lease of Odisha Mining Corporation Ltd. in Sundergarh District.

A proposal over 268.84 ha of forest land located in Khandadhar Reserved Forest (RF) and Khandadhar Protected Reserve (PRF) Forest under Bonai Forest Division for Mining and Ancillary activities has been submitted by OMC. The entire ML area over 268.84 ha is of forest land. Out of the total ML area, 199.814 ha coming under Khandadhar RF and 69.026 coming under Khandadhar PRF.

OMC requested Collector, Kalahandi vide letter no.13318/OMC/F&E/2019 dt 20.08.2019 for allotment of non-forest Govt. land over 19.44 ha in lieu of the forest area proposed for diversion in village Tarapadar under Thuamul Rampur Tahasil of Kalahandi District. Collector, Kalahandi has allotted the non-forest Govt. land over 19.44 ha vide letter dt. 25.10.2019. Copy of the allotment order is furnished as **Annexure-A**. Balance non-forest over 249.40 ha has been allotted by Collector, Koraput vide letter dt. 19.02.2022.

PCCF (N) vide order No. 1109/9F-(Misc.)-387/2021 dt. 08.11.2021 has issued one-time Cost Norm for Compensatory Afforestation. As per the para-2 of the said guideline Compensatory Afforestation to be prepared on "one time cost norm basis" by delinking the CA scheme to wage rate revision and material cost escalation for easy of doing business. In this context base cost norm for compensatory afforestation (Block Plantation) @ 1600 plants per hectare (18 month old seedlings) has been considered for plantation over 19.44 ha of allotted non-forest Govt. land.

Soil & moisture conservation activities has been provided separately as per the approved cost Norm by PCCF, Odisha. Also, water provision aided by solar system with borewell (1 system for 5 ha plantation) fitted with Drip system has been provided.

The site specific schemes are therefore prepared as follows:

1. Details of non-forest land:-

District: Kalahandi

Tahasil: Thuamul Rampur

Sd/-
Sub-Collector
Kalahandi District
Odisha

Village	Khata No.	Plot No.	Area of the plot in Acre	Area considered (Acre)	Kisam
Tarapadar	15 Abad Ajogya Anabadi	21	51.31	16.26	Dangar
		42	49.41	9.64	
		187	38.35	6.03	
		205	39.20	5.45	
		186/209	47.50	10.66	
Total			48.04 Ac. or 19.44 ha.		

The village maps showing the land details for the proposed compensatory afforestation is enclosed as Plate No. I. DGPS survey of the proposed non-forest land has been carried out and authenticated by ORSAC which is enclosed as Plate No. II.

The jointly verified non-forest land by Forest and Revenue authorities is enclosed as **Annexure-(B)**.

G.P.S co-ordinates of survey stations & Key Plan of Compensatory Afforestation area shown on topo sheet is furnished as **Annexure-(C)**.

2. Description of Area

- I. Whether the site selected for Compensatory Afforestation is a land bank or not: This identified non-forest area is under the control of Revenue Department and classified as 'Dangar'. It is not a land bank.
- II. If the CA site is other than the land bank, reasons be given: No land bank has been established yet for this purpose.
- III. In case of non-forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary: Plantation site in Tarapadar is at a distance of 3 Km from Amapadar RF.
- IV. Soil type: Lateritic soil.
- V. Topography :
 - a) Hilly/Undulating/Plain: The Compensatory Afforestation sites are hilly and undulating.
 - b) Slope: Steep/Medium/Gentle: The sites selected for Compensatory Afforestation have medium to gentle slope.
- VI. Whether the area is bearing any root stock of vegetation: The sites selected for Compensatory Afforestation are either barren or with weed growth like *Lantana*, *Eupatorium*, *Woodfordia fruticosa*, *Combretu decandrum*, Root stock of any principal species like Sal is not available.
- VII. Suitability of the land for compensatory afforestation: The identified land is free from encroachment and encumbrance.

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3. Plantation Model:- Block plantation @ 1600 plants per hectare will be raised in Tarapadar over 19.44 ha. Maintenance of plantation for 10 years is also required as per F. No. 11-168/2009-FC dated 14.02.2012 of MoEF. Cost norm for Block plantation @ 1600 plants per hectare is given at Annexure-(D).

4. Technical details:- Technical details of Compensatory Afforestation Scheme are as follows:

a) General Details :

Survey & Demarcation of boundary: The identified area will be surveyed by DGPS and the area will be demarcated with RCC pillars of size 2.5 mtr x 30 cm x 30 cm. This work will be done by the User Agency at Project cost.

Fencing: To protect the plantation from grazing and other biotic interference, it will be provided with chain link wire mesh fencing over 5847.70 meter. Since non-forest areas adjoining this site have also been taken for Compensatory Afforestation for other projects and chain link wire mesh fence will be done around the entire patch, the length of chain link wire mesh fence needed in this project is furnished below.

Sl No	Village	Length of outer periphery of the site in mtr	Length of enclosures if required to be fenced	Length of common fence of adjoining project which need not be fenced	Total length of fence in mtr (3+4+5)
(1)	(2)	(3)	(4)	(5)	(6)
1	Tarapadar	5847.70	0	0	5847.70
Total		5847.70	0	0	5847.70

Estimate for chain link wire mesh fencing has been provided in Annexure – (E).

Planting and post-planting:

b) Plantation will be taken up in time as per cost norm. While taking up plantation, the following points shall be taken up for consideration: -

- Care to be taken to raise healthy plantable seedlings of minimum 60 cm height. 10% extra seedlings are to be raised for replacement of casualty.
- Pitting shall invariably be done during November-February i.e., before onset of monsoon. If possible the soil of upper portion and lower portion of pit should be placed separately in specific direction so that while planting the pits will be filled with top-soil first.
- Planting shall be done on the onset of monsoon to get full benefit of monsoon rain and planting should never be delayed.
- Basal dose of 50 grams of NPK and 5 grams of Chlorpyrifos dust per plant should be applied at the time of planting carefully by mixing with top-soil so that the roots of seedlings do not come in direct contact with fertilizer.

- In case of any mortality of planted seedlings, it should be replaced with good seedlings as soon as possible for better success rate.
- Complete weeding in proper time will be done. Strip weeding will not be permitted.
- Soil-working and application of 2nd dose fertilizer of 50 gms NPK per plant should be done in time.
- Since the area is provided with barbed wire fence, watch & ward will be easier and the watchers may be engaged in weeding in problematic areas alongwith watch & ward.

c) Species:

Although indigenous species are to be preferred in the plantation, considering adverse soil & moisture conditions we may go for hardy exotic species where required so that the plants are able to survive. For success of plantation in interior tribal areas, plantation of fruit and NTFP species plays a great role since economic species have a little value for local people. Considering the topography, soil and moisture availability of the plantation area, the following species will be planted

Name of species	Common name	Remarks
<i>Azadirachta indica</i>	Neem	
<i>Derris indica</i>	Karanja	
<i>Emblica officinalis</i>	Amla	
<i>Terminalia chebula</i>	Harida	In lower areas with good soil depth
<i>Terminalia bellirica</i>	Bahada	In lower areas with good soil depth
<i>Dalbergia sissoo</i>	Sissoo	In lower areas with good soil depth
<i>Gmelina arborea</i>	Gambhari	In lower areas with good soil depth
<i>Dendrocalamus strictus</i>	Salia bamboo	In lower areas with good soil depth healthy seedlings from rhizomes may be planted
<i>Dalbergia sissoo</i>	Sissu	In lower areas with good soil depth
<i>Cassia siamea</i>	Chakunda	In lower areas with good soil depth
<i>Tamarindus indica</i>	Tentuli	In lower areas with good soil depth
<i>Madhuca indica</i>	Mahul	Only two years old seedlings may be planted
<i>Simaruba glauca</i>	Simaruba	In rocky areas with low soil depth
<i>Zizyphus mauritania</i>	Ber	In rocky areas with low soil depth
<i>Tectona grandis</i>	Teak	Potted seedlings from pre-sprouted healthy stumps will be planted
<i>Mangifera indica</i>	Mango	In situ plantation (direct placing of mango stone in planting site) during pre-monsoon may be adopted in few lower areas or where life-saving watering can be done during summer

Sd/-
Suman Krishna Sait
General Manager (Forest)
Pawani
Odisha

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d) **Soil and Moisture Conservation Works :-**

e) Since most of the areas are hilly and undulating, soil conservation measure structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures will be constructed. The cost norm of SMC measures is furnished as **Annexure-(F)**.

f) **Protection of the plantation:** - Chain link mesh fence will be provided all along the periphery of the plantation. Few watchers will also be engaged for protection of the plantation. The cost norm of Chain link mesh fence is furnished as **Annexure-(E)**.

g) **Watering provision of CA plantation:** Watering of the plantation will be carried out aided by solar system with Borewell (1 system for 5 ha plantation) fitted with Drip system. The cost norm is furnished as **Annexure-(G)**.

6. **Proposed Monitoring Mechanism:** - The scheme shall be executed by the Divisional Forest Officer, Kalahandi (South) Forest Division with his staff and all prescribed records are to be maintained. Compensatory Afforestation work will be monitored by officers of State Forest Department and MoEF&CC.

7. **Total cost of the project:** The total cost of the project is Rs. 1,79,93,800.00 (One crore seventy nine lakh ninety three thousand eight hundred) only as detailed in **Annexure-H** which shall be payable by the user agency as per demand of the D.F.O, Kalahandi South Forest Division.

P. R. Mohanta
Divisional Forest Officer
Kalahandi South Forest Division
Kalahandi South Division

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*For
Qd. No.*

OFFICE OF THE COLLECTOR AND DISTRICT MAGISTRATE, KALAHANDI.
 Letter No. 4526 /Rev. Date: 09/12/2020

To

The Divisional Forest Officer
 (South Division), Kalahandi.

Sub:- Submission of Allotment of Govt. land for Compensatory Afforestation.

Ref:- Your Letter No. 5534/3F(Lease)/2020 Dt. 01.12.2020.

Sir,

I am to say that the enclosed schedules of non-forest Government land measuring Ac.48.04 equivalent to 19.44 Ha. at village Tarapadar under Th. Rampur Tahasil has been identified and joint verification completed for allocation of non-forest Government land in lieu of diversion of forest land pertaining to Rantha Iron Ore Mines located in the district of Sundargarh of M/s Odisha Mining Corporation Ltd.

You are therefore requested to please file necessary requisition in Form No.1-A before the Tahasildar, Th. Rampur for processing alienation proposal for sanction of the land in favour of Forest and Environment Department immediately.

LAND SCHEDULE

Name of Mines	Name of village	Khata No.	Plot No.	Kissam	Total area of plot in acres	Area consid in Acres	Type Plantation in Ha.
Rantha Iron Ore Mines	Tarapadar	15 (AAA)	21	Dangar	51.31	16.26	Block plantation 1600 Plants per Ha.
			42	Dangar	49.41	9.64	
			187	Dangar	38.35	6.03	
			205	Dangar	39.20	5.45	
			186/209	Dangar	47.50	10.56	
Total					48.04 Acre or 19.4 Ha. (19.44 Ha.)		

Yours faithfully,

Collector, Kalahandi.

Memo No. 4537 /Rev. Date: 09/12/2020

Copy along with copy of joint verification report and cadastral map forwarded to Tahasildar, Th. Rampur for information. He is requested to process the alienation proposal in favour of the Forest and Environment Department, Odisha on obtaining the requisition from the Divisional Forest Officer (South), Kalahandi.

Collector, Kalahandi.

Memo No. 4538 /Rev. Date: 09/12/2020

Copy to the Sub-Collector, Bhawanipatna for information and necessary action.

✓ Copy to the Managing Director, OMC Ltd., Bhubaneswar for his information and necessary action.

Collector, Kalahandi.

Su
 Tahasildar
 Odisha Mining Corporation Ltd.
 Bhubaneswar

JOINT VERIFICATION REPORT OF NON-FOREST GOVERNMENT LAND IN VILLAGE TARAPADAR UNDER TH.RAMPUR TAHASIL OF KALAHANDI DISTRICT FOR RAISING COMPENSATORY AFFORESTATION (BALD HILL PLANTATION) IN LIEU OF THE FOREST LAND PROPOSED FOR DIVERSION AGAINST RANTHA IRON ORE MINES OF M/s ODISHA MINING CORPORATION LIMITED LOCATED IN THE DISTRICT OF SUNDARGARH, ODISHA.

Certified that on joint verification of Non forest government land (Kissam - Dangar) in village Tarapadar of Thuamul Rampur Tahasil of Kalahandi District, it is found that the scheduled wise land mentioned as given under is suitable for bald hill Block plantation and are free from encroachment and encumbrances, does not comes under DLC land and FR Settlement.

Name of the Mines	Name of the Village	Plot No.	Khata No.	Kissam	Total area of the plot (Acres)	Area considered in (Acres)	Type of Plantation in Hectares
Rantha Iron Ore Mines	Tarapadar	21	15 (AAA)	Dangar	51.31	16.26	Block Plantation 1600 Plants per HA
		42			49.41	9.64	
		187			38.35	6.03	
		205			39.20	5.45	
		186/209			47.50	10.66	
TOTAL						48.04 Acre or 19.44 Ha	

Sectional Inspector
Nakundi

Sectional Forester
Gunpur Section

Range Officer
Th. Rampur (N) Range

Tahasil
Th. Rampur
Thuamul Rampur

Divisional Forest Officer
Kalahandi South Division

Odisha Mining Corporation Ltd.
Bhubaneswar

ANNEXURE-C

PATCH-I						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
1	2	83°05'29.90"	19°33'14.24"	79°40'25"	259°40'25"	158.63
2	3	83°05'35.26"	19°33'15.10"	178°42'53"	358°42'53"	438.34
3	4	83°05'35.42"	19°33'00.85"	267°24'42"	87°24'42"	59.33
4	5	83°05'33.38"	19°33'00.79"	358°24'40"	178°24'40"	116.49
5	6	83°05'33.32"	19°33'04.57"	79°53'45"	259°53'45"	40.95
6	7	83°05'34.71"	19°33'04.79"	342°20'52"	162°20'52"	154.65
7	8	83°05'33.16"	19°33'09.60"	243°18'42"	63°18'42"	94.43
8	1	83°05'30.25"	19°33'08.25"	356°07'49"	176°07'49"	184.31

PERIMETER 1247.13 Mtr. & AREA 3.903 Ha.

PATCH-II						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
1	2	83°05'18.45"	19°32'52.95"	88°52'05"	268°52'05"	226.11
2	3	83°05'26.20"	19°32'53.00"	209°05'05"	29°05'05"	81.8
3	4	83°05'24.81"	19°32'50.69"	130°03'17"	310°03'17"	54.38
4	5	83°05'26.22"	19°32'49.54"	43°18'55"	223°18'55"	117.41
5	6	83°05'29.02"	19°32'52.29"	100°26'28"	280°26'28"	56.69
6	7	83°05'30.93"	19°32'51.93"	192°35'10"	12°35'10"	51.76
7	8	83°05'30.52"	19°32'50.29"	100°10'05"	280°10'05"	88.58
8	9	83°05'33.50"	19°32'49.75"	217°50'56"	37°50'56"	163.57
9	10	83°05'30.01"	19°32'45.59"	265°06'36"	85°06'36"	132.6
10	11	83°05'25.47"	19°32'45.27"	177°59'57"	357°59'57"	60.99
11	12	83°05'25.52"	19°32'43.29"	268°39'25"	88°39'25"	20.01
12	13	83°05'24.83"	19°32'43.28"	326°08'13"	146°08'13"	340.59
13	1	83°05'18.44"	19°32'52.55"	0°00'00"	180°00'00"	12.09

PERIMETER 1406.58 Mtr. & AREA 6.578 Ha.

PATCH-III						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
1	2	83°05'56.03"	19°33'01.23"	118°31'04"	298°31'04"	32.2
2	3	83°05'57.00"	19°33'00.72"	111°18'06"	291°18'06"	78.39
3	4	83°05'59.49"	19°32'59.76"	178°38'09"	358°38'09"	414.93
4	5	83°05'59.65"	19°32'46.27"	276°22'44"	96°22'44"	101.41
5	1	83°05'56.20"	19°32'46.68"	358°39'55"	178°39'55"	447.52

PERIMETER 1074.45 Mtr. & AREA 4.313 Ha.

PATCH-IV						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
1	2	83°05'56.80"	19°32'43.38"	88°16'51"	268°16'51"	98.66
2	3	83°06'00.18"	19°32'43.44"	89°01'46"	269°01'46"	131.48
3	4	83°06'04.69"	19°32'43.46"	191°52'45"	11°52'45"	90.5
4	1	83°06'04.02"	19°32'40.58"	291°31'10"	111°31'10"	227.29

PERIMETER 547.93 Mtr. & AREA 1.022 Ha.

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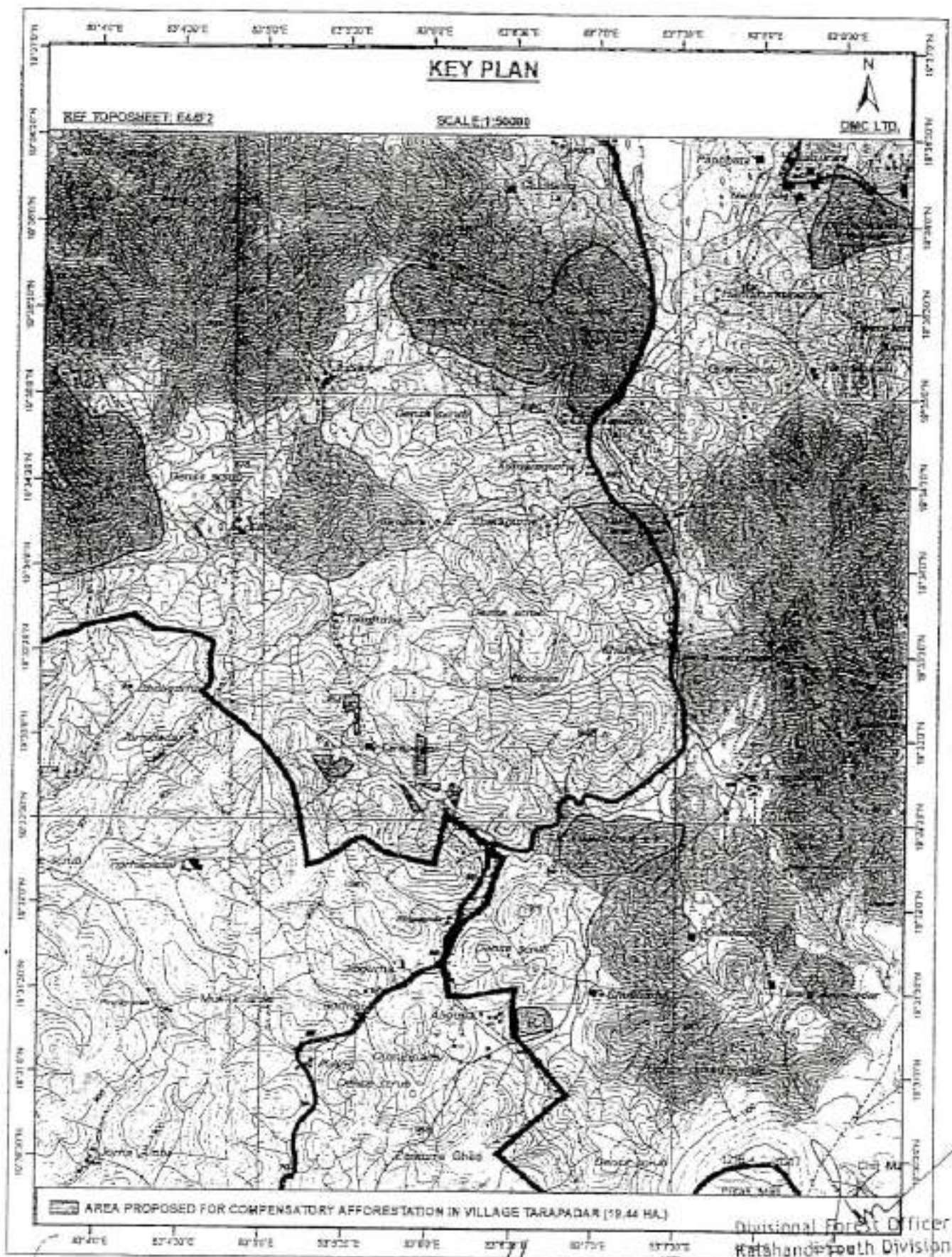
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PATCH-V						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	METERS
1	2	83°06'08.60"	19°32'43.39"	90°20'51"	270°20'51"	36.41
2	3	83°06'09.85"	19°32'43.37"	188°18'25"	8°18'25"	110.63
3	4	83°06'09.26"	19°32'39.82"	98°20'03"	278°20'03"	47.2
4	5	83°06'10.86"	19°32'39.58"	39°32'20"	219°32'20"	85.61
5	6	83°06'12.75"	19°32'41.70"	197°26'15"	17°26'15"	221.63
6	7	83°06'10.39"	19°32'34.86"	334°00'25"	154°00'25"	169.82
7	1	83°06'07.90"	19°32'39.85"	9°58'06"	189°58'06"	110.99
PERIMETER 782.29 Mtr. & AREA 1.726 Ha.						

PATCH-VI						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	METERS
1	2	83°05'50.53"	19°32'42.64"	88°48'25"	268°48'25"	37.06
2	3	83°05'51.80"	19°32'42.65"	140°50'50"	320°50'50"	302.85
3	4	83°05'58.26"	19°32'34.93"	184°19'34"	4°19'34"	49.66
4	5	83°05'58.11"	19°32'33.33"	268°58'13"	88°58'13"	80.28
5	1	83°05'55.35"	19°32'33.31"	333°09'23"	153°09'23"	319.47
PERIMETER 789.32 Mtr. & AREA 1.898 Ha.						

G. P. Sade
 Divisional Forest Officer
 Kalahandi South Division
 Kalahandi South Division

Su
 Odisha



Revenue Inspector
Makrundi

Range Officer
Ch. Rampur (N) Range

Section Forester
Gunpur Section

Tahasildar
Tauamul Rampur

ANNEXURE-(D)

BASE COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION) @ 1600 PLANTS PER HECTARE (18 months old seedling)						
Sl. No.	Items of work	Preferable Period of Execution	No. of Mandays	Labour Cost (in Rs.)	Material Cost (in Rs.)	Total Cost (in Rs.)
1	2	3	4	5	6	7
Nursery Cost						
1	Cost of raising 18 months old seedling including 10% casualty @1760 seedling per hectare	Before 2 (two) year of achievement year	219.12	68146.32	20398.40	88544.72
2	Cost of raising 18 months old seedling for casualty replacement @160 seedling per hectare	Before 01 year of achievement year	19.92	6195.12	1854.41	8049.53
Total						
0th Year (Advance Work) Pre-Planting Operation						
1.	Survey, demarcation and Pillar posting	Nov/Dec	2	622	0	622
2.	Preparation of Treatment Map (Digital Map)	Nov/Dec	1	311	100	411
3.	Site preparation (Cleaning & removal of debris)	Nov/Dec	12	3732	0	3732
4.	Creation of 4.00 mt. wide Inspection Path	Feb/Mar	1	311	0	311
5.	Alignment and stacking	Feb/Mar	2	622	0	622
6.	Digging of pits (45 cm x 45 cm x 45 cm) in hard and gravelly soil	Feb/Mar	64	19904	0	19904
7.	Construction of Temporary Labour Shed, Drinking water facility and First-Aid etc.	Jan/Mar	0	0	3500	3500
	Total		82	25502	3600	29102
1st Year/ Planting Year						
1.	Refilling of pits by altering the dug-out soil of the pits, application of Organic compounds/ CDM/ FYM & mixing the same properly.	Jun/Jul	12	3732	8000	11732
2.	Transportation of 18 months old polytop seedlings in hired truck/ tractor from the permanent/ Mega nursery to planting site including Loading & unloading. (Average lead of 10 Rkm) & Stacking the seedling @ Rs. 6/- per Seedling. (1760 nos.)	Jul/Aug	0	0	10560	10560
3.	Watering the polytop seedlings at planting site	Jul/Aug	3	933	0	933
4.	Conveyance of polytop seedlings on head load from the stacking site to individual dugout pits within the planting site, applying insecticide, fertilizers & planting after scooping the soil with other applied materials & pressing the soil properly around the planted seedlings.	Jul/Aug	36	11196	0	11196

SN

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5.	Cost of Fertilizer & Insecticide (a) NPK/ Bio-fertilizer @ 50 gms/ plant as basal dose = 80 kg @ Rs. 30/- per kg = Rs. 2400.00 (b) Urea/ Vermicompost/ Mo Khata/ any other fertilizer in two subsequent doses @ Rs. 1,200.00 (c) Insecticide/ Bio-pesticide @ 5 gms/ plant = 8 kg @ Rs. 150/- per kg = Rs. 1200.00	Jul/Aug	0	0	4800	4800
6.	Casualty Replacement @ 10% (160 nos.)	Jul/Aug	4	1244	0	1244
7.	1 st weeding & Manuring	Aug/Sept	15	4665		4665
8.	2 nd Weeding, Soil working (1mt. diameter around the plants) and Manuring.	Oct/Nov	20	6220	0	6220
9.	Fire line tracing (2m. wide fire line over 400 m long) including maintenance of inspection path.	Feb/Mar	3	933	0	933
10.	Watch & Ward including watering as per requirement	Aug-Mar	12	3732	0	3732
	TOTAL		105	32655	23360	56015
2nd Year Maintenance						
1.	Transportation of 160 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs. 6/- per seedlings	Jul	0	0	960	960
2.	Casualty replacement- 10%	Jul	4	1244	0	1244
3.	Cost of Fertilizer & Insecticide A) Cost of Insecticide/ Bio-pesticide @ 5 gms/plant = 0.8 Kg @ Rs. 150/- per kg = Rs. 120/- B) Urea/ NPK/ Bio-fertilizer/ Vermicompost/ Mo Khata/ any other fertilizer @ Rs. 4486/-	Aug/Sept	0	0	4606	4606
4.	Weeding (Complete weeding), Manuring & Soil working (1mt. diameter around the plants)	Sept/Oct	20	6220	0	6220
5.	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
6.	Watch & Ward including watering as per requirement	Apr-Mar	18	5598	0	5598
7.	Maintenance of Temporary Labour Shed, Drinking water facility and First-Aid etc.				1000	1000
	Total		45	13995	6566	20561
3rd Year Maintenance						
7	Cost of Fertilizer Urea/ NPK/ Bio-fertilizer/ Vermicompost/ Mo Khata/ any other fertilizer	Sept/Oct	0	0	4486	4486
8	Weeding, Manuring & Soil working (1mt. diameter around the plants)	Sept/Oct	20	6220	0	6220
9	Fire line tracing (2 m wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
10.	Watch & Ward including watering as per requirement	Apr/Mar	18	5598	0	5598
11	Maintenance of Temporary Labour Shed, Drinking water facility and First-Aid etc.	Apr/Mar			1000	1000
	Total		41	12751	5486	18237

4 th Year Maintenance						
1	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
2	Watch & Ward	Apr-Mar	18	5598	0	5598
	Total		21	6531	0	6531
5 th Year Maintenance						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
6 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933.0
2.	Pruning of branches, Singling out of multiple shoots	Jan/Mar	5	1555.00	0	1555.0
3.	Watch & Ward	Apr-Mar	18	5598.00	0	5598.0
	Total		26	8086	0	8086.0
7 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
8 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
9 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
10 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933	0	933
2.	Watch & Ward	Apr/Mar	18	5598.00	0	5598
	Total		21	6531	0	6531

Year wise Abstract of Cost Norm (Showing seedling cost separately)							
Sl. No.	Year	No. person days	Labour Cost @ Rs. 311/- per day	Material Cost	Monitoring Evaluation, Learning, Documentation and Other Contingency (5%) of (4+5)	Cost of Seedlings	TOTAL COST
1.	0 th Year	82	25502	3600	1398.00	0	30500.00
2.	1 st Year	105	32655	23360	2800.00	88545	147360.00
3.	2 nd Year	45	13995	6566	1028.00	8050	29639.00
4.	3 rd Year	41	12751	5486	911.00	0	19148.00
5.	4 th Year	21	6531	0	326.00	0	6857.00
6.	5 th Year	21	6531	0	326.00	0	6857.00
7.	6 th Year	26	8086	0	404.00	0	8490.00
8.	7 th Year	21	6531	0	326.00	0	6857.00
9.	8 th Year	21	6531	0	326.00	0	6857.00
10.	9 th Year	21	6531	0	326.00	0	6857.00
11.	10 th Year	21	6531	0	326.00	0	6857.00
	Total	425	132175	39012	8497	96595	276279.00

Matrix for Model-I-B Conventional CA Plantation (AR) 1600 plants per Ha.

In Rupees

Sl. NO.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	Total Cost [10 Years]
	Base Norm	30500	207360	25639	15148	6857	6857	8490	8057	6857	6857													
1	2021-22	30500	154728	32674	22356	8335	8791	11377	9548	10131	10617	11169												310116
2	2022-23		32025	162464	34308	22274	8751	9188	11946	10150	10638	11169	11727											325623
3	2023-24			33626	170587	36023	24438	9190	9648	12543	10637	11170	11727	12313										341502
4	2024-25				35307	179116	37824	25660	9650	10130	11170	11669	11727	12313	12929									3579537
5	2025-26					37072	188072	89715	16943	10132	10637	11169	11727	12313	12929	13575								376947
6	2026-27						38926	197476	41701	22280	10640	11169	11727	12313	12929	13575	14254							395795
7	2027-28							40872	207350	43786	29705	11372	11727	12313	12929	13575	14254	14967						415586
8	2028-29								42516	217718	45975	31190	11727	12313	12929	13575	14254	14967	15715					436365
9	2029-30									43002	228604	48274	32750	12313	12929	13575	14254	14967	15715	16501				458185
10	2030-31										49335	240044	33688	12313	12929	13575	14254	14967	15715	16501	17326			481095

Suk
5-11-2023
2023-24
2024-25
2025-26
2026-27
2027-28
2028-29
2029-30
2030-31
Optional

P. Rade
Divisional Forest Officer
Kalahandi District, Odisha

ANNEXURE – (E)

Fencing for Compensatory Plantation raised outside the Forest Areas using Angle Iron & Chain Link wire mesh (250 Rmt/Ha.)						
Sl. No	Item of work	Preferable Period of Execution	Man days	Wages	Material cost	Total Cost (Rs. per Ha.)
0 th Year (PPO)						
1	Earth work (Excavation of hole) in Hard soil at a distance 3 mt. 0.40m x 0.40m = 0.064 x 84 = 5.376 cum. @ Rs.140/ cum = Rs.753.		2.42	752.62	0.0	752.6
2	Cement concrete (1:4:8) using 40 mm BHC metal 84 X 0.40m X 0.10m = 1.344 @ 3755.94/cum		0	0	5,047.4	5,047.4
3	Angle Iron pole of size 50mm X 50 mm X 6mm of height 2.40 mt. 84 x 2.40 = 201.60 Sqmt. @ 4.50/kg/Sqmt. = 907.20 kg @ 69.50 per kg				63,050.0	63,050.0
4	Cement Concrete (1:2:4) for fixing the iron angle pole using 12mm BHC Chips 84 X 0.40m X 0.40m X 0.30m = 4.032 cum @ 5486.77/cum				22,123.0	22,123.0
5	Cost of Chain link mess using 4mm Dia GI wire having gap size 50mm X 50mm 250 Rmt X 2.10mt = 525 Sq. mt 2331/Sqmt = Rs. 1,73,775				1,73,775.0	1,73,775.0
6	Double cost painting of Iron angle pole over a cost of primer using good quality enamel paint. 84 x 2.10 x 0.20 = 35.28 Sqmt. @ Rs.108.80/Sqmt				3,838.0	3,838.0
7	Painting of GI chain link mess 250 x 2.10 x 2 = 1050/10 = 105 Sqmt. @ 108.80 Sqmt.				11,424.0	11,424.0
8	Transportation of Chain link mess, iron angle, Straightening & tying of chain link mess etc. @ 2% of the total cost.				5,600.0	5,600.0
Total			2.42	752.62	2,84,857.4	2,85,610.0
Rate per running mt. 2,85,610/250 = Rs.1142/Rmt						
1 st Year Maintenance						
1	No Maintenance is required	Sept / Oct	0	0	0	0
2 nd Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
3 rd Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
4 th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
5 th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
6 th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
7 th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
8 th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000

ANNEXURE - (F)

SMC Works Model-C			
Cost Norms for creation of Compensatory Afforestation with stabilization of Soil & Conservation of Moisture (1000 Plants/ Ha).			
Sl. No.	Items of work	Preferable Period of Execution	Total Cost
0th Year (Pre-Planting Operation)			
8.	Nil		0
1st Year			
9.	Soil Conservation measure structures like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LBCD, Wire mesh LBCD, Sub surface Dyke & WHS as per the slope & site requirement on LS	Apr/Sept	20.215
2nd Year,			
10.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
3rd Year			
11.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
4th Year			
12.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
4th Year			
11.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
Total			32,343.0

Abstract

Sl. No.	Year	No. person days	Labour Cost @ Rs. 311/- per day	Material Cost	TOTAL COST (Rs). Considered in the Matrix
1.	0 th Year	0.0	0.0	0.0	0.0
2.	1 st Year	0.0	0.0	20,215.0	20,215.00
3.	2 nd Year	0.0	0.0	3,032.00	3,032.00
4.	3 rd Year	0.0	0.0	3,032.00	3,032.00
5.	4 th Year	0.0	0.0	3,032.00	3,032.00
6.	5 th Year	0.0	0.0	3,032.00	3,032.00
Total		0.00	0.00	32,343.0	32,343.0

Sd/-
 Secretary, Odisha Sahitya Akademi
 Odisha Sahitya Akademi
 Odisha Sahitya Akademi

P. N. S. S.
 Divisional Forest Officer
 Kalahandi South Division

Matrix for (SMC)

In Rupees

Sl. No.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
	Base Norm	0	20215	3032	3032	3032	3032											35633
1	2021-22	0	21226	3342	3510	2685	3870											37415
2	2022-23		0	22287	3509	3686	3869	4064										39284
3	2023-24			0	23401	3684	3870	4062	4267									41248
4	2024-25				0	34571	3868	4064	4265	4480								43310
5	2025-26					0	25800	4061	4267	4478	4704	4939						45475
6	2026-27						0	27090	4264	4480	4702	4937	5186					47749
7	2027-28							0	28445	4477	4704	4939	5184	5445				50136
8	2028-29								0	29867	4701	4936	5186	5443	5717			52642
9	2029-30									0	31360	4636	5183	5445	5715	6003		55274
10	2030-31										0	32928	5183	5445	5715	6003		55274

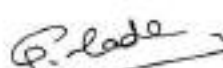
P. Rade
Divisional Forest Officer
Kalahandi South Division

Sac
Divisional Forest Officer
Kalahandi South Division

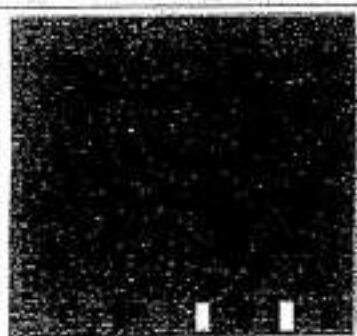
Water Model-W-I			
Water provision to CA Plantation			
Solar system with Bore well (1 system for 5 Ha. Plantation) fitted with Drip system			
Year of Installation (0 th Year)			
1	Cost of Borewell	1,50,000	
2	Installation of Solar panel & other System	3,00,000	
3	Cost of 0.5 HP submersible motor with accessories	50,000	
4	Water Storage Tanks/ Flexible pipes	15,000	
5	Cost of laying Drip system including all accessories, fitting etc. with 12% GST	3,02,431	
Total		8,17,431	
6	Cost of Water & watering per Ha. $(8,17,431/5) = \text{Rs. } 1,63,486$		1,63,486
1 st Year Watering			
7	No maintenance required		0
Total			0
2 nd Year Watering			
8	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
3 rd Year Watering			
9	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
4 th Year Watering			
10	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
5 th Year Watering			
11	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174

Abstract					
Sl. No.	Year	No. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.) Considered in the Matrix
1	0 th Year	0	0.0	163486.0	163486.0
2	1 st Year	0	0.0	0.0	0.0
3	2 nd Year	0	0.0	8174.0	8174.0
4	3 rd Year	0	0.0	8174.0	8174.0
5	4 th Year	0	0.0	8174.0	8174.0
6	5 th Year	0	0.0	8174.0	8174.0
Total		0	0.0	196182	1,96,182


 Suman Mishra
 General Manager
 Power of Attorney holder
 Odisha Mining Corporation Ltd.
 Bhubaneswar


 P. Lade
 Divisional Forest Officer
 Kalahandi South Division

GIS based Decision Support System



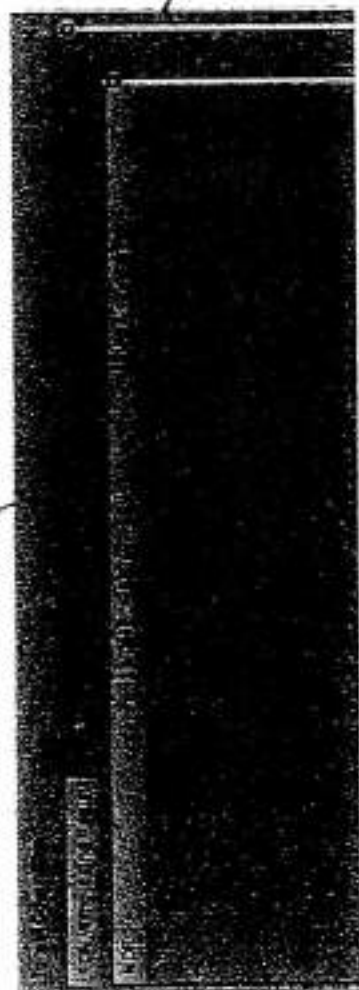
KALAHATI



KALAHATI

Lat: 10.553 Long: 83.007

Scale: 1:5000



Sr
Suman Krishna Sii
Geography
Odisha
Bhubaneswar

305 243

TOTAL COST OF THE COMPENSATORY AFFORESTATION SCHEME

Sl. No.	Item of Work	Total Estimated Cost in Rs.
Chain link weir mesh fencing		
1	Chain link weir mesh fence around plantation sites @ Rs. 4,40,299/- per 250 Rmt/Ha = Rs.1761.196 or Rs.1761.20/Rmt. So, fencing required over 5847.70 Rmt X Rs.1761.20	1,02,98,969.24
Sub-total:		1,02,98,969.24
Plantation		
2	Block plantation @ 1600 plants per ha in Tarapadar over 19.44 ha. X Rs. 325623/-	63,30,111.12
Sub-total:		63,30,091.68
Soil Moisture conservation activities		
3	Soil conservation measure structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures as per the Guideline by PCCF, Odisha vide letter dt. 08.11.2021 = 19.44 ha X Rs. 37415/-	7,27,347.60
Sub-total:		7,27,347.60
4	Water provision to CA Plantation over an area of 19.44 Ha.: Solar system with Bore well (1 system for 5 Ha. Plantation) fitted with Drip system= Rs. 212444/- X 3 Unit	6,37,332.00
Sub-total:		6,37,332.00
Total		1,79,93,759.96 Or 1,79,93,800.00

(Rupees One crore seventy nine lakh ninety three thousand eight hundred) only.

Sd/-
Secretary, Odisha Sahitya Akademi
Gandhinagar, Bhubaneswar
Odisha

Sd/-
Divisional Forest Officer
Divisional Forest Officer
Kalahandi South Division
Kalahandi South Division

OFFICE OF THE DIVISIONAL FOREST OFFICER, JEYPORE
FOREST DIVISION, JEYPORE

Memo No. 5235 /4F/60-21(Misc)
Dated Jeypore, the 19th Mar. 2022.

The Divisional Forest Officer,
Bonai Forest Division

Sub: Proposal for Diversion of 268.84 ha of forest land (including 12.581 ha of forest land earmarked for Safety Zone) within Rantha Iron Ore of Mines of OMC Ltd.

With reference to the above cited subject, I submit herewith the compensatory afforestation scheme as submitted by advisor (F & E) OMC, Odisha against diversion of 249.40 ha. of non-forest Govt. land in village PAMI under Boipariguda Tahasil of Koraput District against to Rantha Iron Ore Mines of Odisha Mining Corporation Ltd for approve and onward transmission to higher quarter.

(Encl: -As above)

N. Sengupta
Divisional Forest Officer,
Jeypore Forest Division

Memo No. 5236 /4F/19.9.2022

Copy submitted to the Principal Conservator of Forests, (Nodal) O/o the P.C.C.F, Odisha, Bhubaneswar/ Regional Chief Conservator of Forests, Koraput Circle, Koraput for favour of kind information and necessary action.

N. Sengupta
Divisional Forest Officer,
Jeypore Forest Division

Memo No. 5237 /4F/19.9.2022

Copy forwarded to the Advisor (F & E) Odisha Mining Corporation for information and necessary action with reference to his letter No 14459/OM/19.9.2022 dated-03.08.2022

SCHEME FOR
SITE SPECIFIC COMPENSATORY
AFFORESTATION
OVER
249.40 HA OF NON-FOREST GOVT. LAND
IDENTIFIED IN VILLAGE
PAMI
UNDER BOIPARIGUDA TAHASIL
IN
KORAPUT DISTRICT
AGAINST
RANTHA IRON ORE MINES
OF
ODISHA MINING CORPORATION LTD.

(A Govt. of Odisha Undertaking)

OMC HOUSE, POST BOX-34, BHUBANESWAR-1

(ON ONE TIME COST NORM BASIS)

See
Sd/-
Joint Secretary
Odisha Mining Corporation Ltd.
Bhubaneswar

Detailed scheme for Compensatory Afforestation to be carried out in lieu of 268.84 hectares of forest area to be diverted within Rantha Mining Lease of Odisha Mining Corporation Ltd. in Sundergarh District.

A proposal over 268.84 ha of forest land located in Khandadhar Reserved Forest (RF) and Khandadhar Protected Reserve (PRF) Forest under Bonai Forest Division for Mining and Ancillary activities has been submitted by OMC. The entire ML area over 268.84 ha is of forest land. Out of the total ML area, 199.814 ha coming under Khandadhar RF and 69.026 coming under Khandadhar PRF.

OMC requested Collector, Koraput vide letter no. 10236/OMC/F&E/2021 dt 14.07.2021 for allotment of non-forest Govt. land over 249.40 ha in lieu of the forest area proposed for diversion in village Pami under Boipariguda Tahasil of Koraput District. Collector, Koraput has allotted the non-forest Govt. land over 249.40 ha vide letter dt. 19.07.2022. Copy of the allotment order is furnished as Annexure-A. Balance non-forest over 19.44 ha has been allotted by Collector, Kalahandi vide letter dt. 25.10.2019.

PCCF (N) vide order No. 1109/9F-(Misc.)-387/2021 dt. 08.11.2021 has issued one-time Cost Norm for Compensatory Afforestation. As per the para-2 of the said guideline Compensatory Afforestation to be prepared on "one time cost norm basis" by delinking the CA scheme to wage rate revision and material cost escalation for easy of doing business. It has been recommended to carry out bald hill block plantation @ 1600 plants per ha in the joint verification conducted by forest and revenue officials. But no cost norm has been provided for Bald hill block plantation as per the Guideline issued by PCCF (N). In this context base cost norm for compensatory afforestation (Block Plantation) @ 1600 plants per hectare (18 month old seedlings) has been considered for plantation over 249.40 ha of allotted non-forest Govt. land.

Soil & moisture conservation activities has been provided separately as per the approved cost Norm by PCCF, Odisha. Also, water provision aided by solar system with borewell (1 system for 5 ha plantation) fitted with Drip system has been provided.

The site specific schemes are therefore prepared as follows:

1. Details of non-forest land:-

District: Koraput

Tahasil: Boipariguda

Su
Odisha Mining Corporation Ltd.
Bhubaneswar

Village	Khata No.	Plot No.	Area of the plot in Ha	Area considered in Ha	Kisam
Pami	15 Abad Ajogya Anabadi	496 ✓	11.75	11.13 ✓	Pahad
		504 ✓	12.00	12.00 ✓	
		505 ✓	10.65	10.65 ✓	
		506 ✓	12.00	12.00 ✓	
		507 ✓	8.50	8.50 ✓	
		508 ✓	12.00	12.00 ✓	
		509 ✓	10.20	10.20 ✓	
		510 ✓	14.15	14.15 ✓	
		511 ✓	8.75	8.75 ✓	
		512 ✓	11.15	11.15 ✓	
		513 ✓	6.75	6.75 ✓	
		514 ✓	4.90	4.39 ✓	
		527 ✓	8.75	7.02 ✓	
		534 ✓	5.15	3.45 ✓	
		535 ✓	11.30	11.06 ✓	
		536 ✓	5.40	5.40 ✓	
		537 ✓	13.15	13.15 ✓	
		538 ✓	7.30	7.30 ✓	
		539 ✓	11.95	11.95 ✓	
		540 ✓	13.40	13.40 ✓	
		541 ✓	16.25	16.22 ✓	
		543 ✓	2.80	1.43 ✓	
		545 ✓	4.10	1.45 ✓	
		547 ✓	6.30	4.51 ✓	
		554 ✓	15.00	14.85 ✓	
		555 ✓	2.60	1.11 ✓	
		560 ✓	8.60	7.71 ✓	
		567 ✓	8.75	7.72 ✓	
Total			249.40 ha		

The village maps showing the land details for the proposed compensatory afforestation is enclosed as Plate No. I. DGPS survey of the proposed non-forest land has been carried out and authenticated by ORSAC which is enclosed as Plate No. II.

The jointly verified non-forest land by Forest and Revenue authorities is enclosed as Annexure-(B).

G.P.S co-ordinates of survey stations & Key Plan of Compensatory Afforestation area shown on topo sheet is furnished as Annexure-(C).

2. Description of Area

- I. Whether the site selected for Compensatory Afforestation is a land bank or not: This identified non-forest area is under the control of Revenue Department and classified as 'Dangar'. It is not a land bank.

Sn

II. If the CA site is other than the land bank, reasons be given: No land bank has been established yet for this purpose.

III. In case of non-forest area identified for CA, then what is the distance of CA site from the adjoining forest boundary: Plantation site in Pami is at a distance of 4 Km from Kangraparha RF.

IV. Soil type: Lateritic soil.

V. Topography :

- a) Hilly/Undulating/Plain: The Compensatory Afforestation sites are hilly and undulating.
- b) Slope: Steep/Medium/Gentle: The sites selected for Compensatory Afforestation have medium to gentle slope.

VI. Whether the area is bearing any root stock of vegetation: The sites selected for Compensatory Afforestation are either barren or with weed growth like *Lantana Eupatorium*, *Woodfordia fruticosa*, *Combretu decandrum*, Root stock of any principal species like Sal is not available.

VII. Suitability of the land for compensatory afforestation: The identified land is free from encroachment and encumbrance.

3. Plantation Model:- Block plantation @ 1600 plants per hectare will be raised in Pami over 249.40 ha. Maintenance of plantation for 10 years is also required as per F. No. 11-168/2009-FC dated 14.02.2012 of MoEF. Cost norm for Block plantation @ 1600 plants per hectare is given at Annexure-(D).

4. Technical details:- Technical details of Compensatory Afforestation Scheme are as follows:

a) General Details :

Survey & Demarcation of boundary: The identified area will be surveyed by DGPS and the area will be demarcated with RCC pillars of size 2.5 mtr x 30 cm x 30 cm. This work will be done by the User Agency at Project cost.

Fencing: To protect the plantation from grazing and other biotic interference, it will be provided with chain link wire mesh fencing over 13212.48 meter. Since non-forest areas adjoining this site have also been taken for Compensatory Afforestation for other projects and chain link wire mesh fence will be done around the entire patch, the length of chain link wire mesh fence needed in this project is furnished below.

Sl No	Village	Length of outer periphery of the site in mtr	Length of enclosures if required to be fenced	Length of common fence of adjoining project which need not be fenced	Total length of fence in mtr (3+4+5)
(1)	(2)	(3)	(4)	(5)	(6)
1	Tarapadar	13212.48	0	0	13212.48
Total		13212.48	0	0	13212.48

Estimate for chain link wire mesh fencing has been provided in Annexure - (E).

Planting and post-planting:

b) Plantation will be taken up in time as per cost norm. While taking up plantation, the following points shall be taken up for consideration: -

- Care to be taken to raise healthy plantable seedlings of minimum 60 cm height. 10% extra seedlings are to be raised for replacement of casualty.
- Pitting shall invariably be done during November-February i.e., before onset of monsoon. If possible the soil of upper portion and lower portion of pit should be placed separately in specific direction so that while planting the pits will be filled with top-soil first.
- Planting shall be done on the onset of monsoon to get full benefit of monsoon rain and planting should never be delayed.
- Basal dose of 50 grams of NPK and 5 grams of Chlorpyrifos dust per plant should be applied at the time of planting carefully by mixing with top-soil so that the roots of seedlings do not come in direct contact with fertilizer.
- In case of any mortality of planted seedlings, it should be replaced with good seedlings as soon as possible for better success rate.
- Complete weeding in proper time will be done. Strip weeding will not be permitted.
- Soil-working and application of 2nd dose fertilizer of 50 gms NPK per plant should be done in time.
- Since the area is provided with barbed wire fence, watch & ward will be easier and the watchers may be engaged in weeding in problematic areas alongwith watch & ward.

c) Species:

Although indigenous species are to be preferred in the plantation, considering adverse soil & moisture conditions we may go for hardy exotic species where required so that the plants are able to survive. For success of plantation in interior tribal areas, plantation of fruit and NTFP species plays a great role since economic species have a little value for local people. Considering the topography, soil and moisture availability of the plantation area, the following species will be planted

Name of species	Common name	Remarks
<i>Azadirachta indica</i>	Neem	
<i>Derris indica</i>	Karanja	
<i>Emblīca officinalis</i>	Amla	
<i>Terminalia chebula</i>	Harida	In lower areas with good soil depth

<i>Terminalia bellirica</i>	Bahada	In lower areas with good soil depth
<i>Dalbergia sissoo</i>	Sissoo	In lower areas with good soil depth
<i>Gmelina arborea</i>	Gambhari	In lower areas with good soil depth
<i>Dendrocalamus strictus</i>	Salia bamboo	In lower areas with good soil depth healthy seedlings from rhizomes may be planted
<i>Dalbergia sissoo</i>	Sissu	In lower areas with good soil depth
<i>Cassia siamea</i>	Chakunda	In lower areas with good soil depth
<i>Tamarindus indica</i>	Tentuli	In lower areas with good soil depth
<i>Madhuca indica</i>	Mahul	Only two years old seedlings may be planted
<i>Simaruba glauca</i>	Simaruba	In rocky areas with low soil depth
<i>Zizyphus mauritania</i>	Ber	In rocky areas with low soil depth
<i>Tectona grandis</i>	Teak	Potted seedlings from pre-sprouted healthy stumps will be planted
<i>Mangifera indica</i>	Mango	In situ plantation (direct placing of mango stone in planting site) during pre-monsoon may be adopted in few lower areas or where life-saving watering can be done during summer

- d) Soil and Moisture Conservation Works :-
- e) Since most of the areas are hilly and undulating, soil conservation measure structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures will be constructed. The cost norm of SMC measures is furnished as Annexure-(F).
- f) Protection of the plantation: - Chain link mesh fence will be provided all along the periphery of the plantation. Few watchers will also be engaged for protection of the plantation. The cost norm of Chain link mesh fence is furnished as Annexure-(E).
- g) Watering provision of CA plantation: Watering of the plantation will be carried out aided by solar system with Borewell (1 system for 5 ha plantation) fitted with Drip system. The cost norm is furnished as Annexure-(G).
6. Proposed Monitoring Mechanism: - The scheme shall be executed by the Divisional Forest Officer, Kalahandi (South) Forest Division with his staff and all prescribed records are to be maintained. Compensatory Afforestation work will be monitored by officers of State Forest Department and MoEF&CC.
7. Total cost of the project: The total cost of the project is Rs. 16,67,94,800.00 (Rupees Sixteen crore sixty seven lakh ninety four thousand eight hundred) only as detailed in Annexure-H which shall be payable by the user agency as per demand of the D.F.O, Kalahandi South Forest Division.

Recommendation of DFO - not to plant
Cassia siamea, teak and Simaruba

19.9.2022
Divisional Forest Officer
Jeypore Forest Division

COLLECTORATE, KORAPUT
(REVENUE SECTION)

No. 3552 XXVI-349/2022Dated: 19.07.2022

To

The Divisional Forest Officer,
Jeypore,

Sub:

Allotment of Non-Forest govt. land for raising Compensatory Afforestation over an area of Ha.249.40 in lieu of the forest land purposed for diversion pertaining to Rantha Mining Lease of OMC Ltd. and over an area of Ha.108.792 lieu of forest land proposed for diversion pertaining to Dubuna Sakradahi Mining lease of OMC Ltd. and over an area of Ha.3.323 lieu of forest land proposed to use for exploration pertaining to Balda-Palsha-Jajang Iron Ore Mines of OMC Ltd.

Ref:

Your letter No. 3745, Dated: 04.07.2022

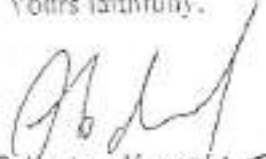
Sir,

With reference to your letter on the aforementioned subject, it is to inform that, verified the joint verification report and maps jointly conducted by the Forest and Revenue personnel over an area of 249.40 ha. non-forest Govt. land by kissam parbat in village Pami under Boipariguda Tahasil in lieu of the forest land purposed for diversion pertaining to Rantha Mining Lease of OMC Ltd. and over an area of Ha.108.792 lieu of forest land proposed for diversion pertaining to Dubuna Sakradahi Mining lease of OMC Ltd. and over an area of Ha.3.323 lieu of forest land proposed to use for exploration pertaining to Balda-Palsha-Jajang Iron Ore Mines of OMC Ltd.

In this connection, you are requested to file necessary requisition in Form No. 1-A before the Tahasildar, Boipariguda for processing alienation proposal at his end in favour of Forest Deptt. Govt. of Odisha.

Encl: Copy of Joint Verification Report
and 02 Nos Maps

Yours faithfully,


Collector, Koraput

Memo No- 3552/22Dated: 19.07.22

Copy forwarded to Tahasildar, Boipariguda for information and necessary action.

See


Addl. District Magistrate,
Koraput

JOINT VERIFICATION REPORT OF NON-FOREST GOVERNMENT LAND IN VILLAGE PAMI UNDER BAIPARIGUDA TAHASIL OF KORAPUT DISTRICT FOR RAISING COMPENSATORY AFFORESTATION (BALD HILL PLANTATION) IN VIEW OF THE FOREST LAND PROPOSED FOR DIVERSION FOR RANTHA IRON ORE MINING LEASE OF M/s ODISHA MINING CORPORATION LIMITED LOCATED IN THE DISTRICT OF SUNDARGARH, ODISHA.

Certified that on joint verification of Non forest Government land (Kissam - Pahad) in village Pami of Baipariguda Tahasil of Koraput District, it is found that the scheduled wise land mentioned in the table is suitable for Bald Hill plantation @ 1600 plants/ha and are free from encroachment and encumbrances. The area does not come under DLC land and FR Settlement record.

Name of the Mines	Name of the Village	Khata No.	Plot No.	Total area of the plot (in Ha.)	Area considered (in Ha.)	Kissam	Type of Plantation recommended
Rantha Iron ore Mines	Pami	37 (A.A.A)	496	11.75	11.13	Pahad	Bald Hill Plantation 1600 Plants per HA over 249.40 ha.
			504	12.00	12.00	Pahad	
			505	10.65	10.65	Pahad	
			506	12.00	12.00	Pahad	
			507	8.50	8.50	Pahad	
			508	12.00	12.00	Pahad	
			509	10.20	10.20	Pahad	
			510	14.15	14.15	Pahad	
			511	8.75	8.75	Pahad	
			512	11.15	11.15	Pahad	
			513	6.75	6.75	Pahad	
			514	4.90	4.39	Pahad	
			527	8.75	7.02	Pahad	
			534	5.15	3.45	Pahad	
			535	11.30	11.06	Pahad	
			536	5.40	5.40	Pahad	
			537	13.15	13.15	Pahad	
			538	7.30	7.30	Pahad	
			539	11.95	11.95	Pahad	
			540	13.40	13.40	Pahad	
			541	16.25	16.22	Pahad	
			543	2.80	1.43	Pahad	
			545	4.10	1.45	Pahad	
			547	6.30	4.51	Pahad	
			554	15.00	14.85	Pahad	
			555	2.60	1.11	Pahad	
			560	8.60	7.71	Pahad	
			567	8.75	7.72	Pahad	
TOTAL					249.40 Ha.		

Revenue Inspector
Revenue Inspector
Dasmantpur

Forest Range Officer
Boipariguda Range

Tahasildar
Boipariguda

Divisional Forest Officer
Bypore Forest Division

BOUNDARY DESCRIPTION OF THE CA LAND PROPOSED						
POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
1	2	82°29'48.86"	18°39'21.85"	90°00'00"	270°00'00"	311.63
2	3	82°29'59.49"	18°39'21.76"	123°28'22"	303°28'22"	147.46
3	4	82°30'03.66"	18°39'19.08"	179°38'55"	359°38'55"	217.05
4	5	82°30'03.65"	18°39'12.02"	90°05'33"	270°05'33"	398.31
5	6	82°30'17.24"	18°39'11.89"	89°13'25"	269°13'25"	153.63
6	7	82°30'22.48"	18°39'11.92"	180°57'05"	0°57'05"	547.59
7	8	82°30'22.01"	18°38'54.11"	101°38'01"	281°38'01"	36.74
8	9	82°30'23.24"	18°38'53.86"	12°59'41"	192°59'41"	56.48
9	10	82°30'23.69"	18°38'55.65"	92°46'45"	272°46'45"	109.14
10	11	82°30'27.41"	18°38'55.45"	359°22'39"	179°22'39"	204.61
11	12	82°30'27.39"	18°39'02.10"	359°31'04"	179°31'04"	235.44
12	13	82°30'27.39"	18°39'09.76"	46°31'02"	226°31'02"	92.68
13	14	82°30'29.70"	18°39'11.82"	89°18'33"	269°18'33"	319.19
14	15	82°30'40.59"	18°39'11.85"	179°26'18"	359°26'18"	92.78
15	16	82°30'40.60"	18°39'08.84"	254°55'17"	74°55'17"	77.88
16	17	82°30'38.03"	18°39'08.20"	163°10'11"	343°10'11"	175.65
17	18	82°30'39.71"	18°39'02.72"	134°25'25"	314°25'25"	100.07
18	19	82°30'42.13"	18°39'00.42"	64°04'09"	244°04'09"	144.31
19	20	82°30'46.58"	18°39'02.43"	341°17'25"	161°17'25"	63.2
20	21	82°30'45.90"	18°39'04.39"	71°08'49"	251°08'49"	45.85
21	22	82°30'47.39"	18°39'04.85"	342°43'42"	162°43'42"	131.89
22	23	82°30'46.09"	18°39'08.96"	267°30'38"	87°30'38"	48.73
23	24	82°30'44.43"	18°39'08.91"	357°57'39"	177°57'39"	90.99
24	25	82°30'44.34"	18°39'11.87"	89°18'33"	269°18'33"	414.92
25	26	82°30'58.50"	18°39'11.92"	162°22'42"	342°22'42"	136.3
26	27	82°30'59.87"	18°39'07.68"	243°33'14"	63°33'14"	175.06
27	28	82°30'54.50"	18°39'05.19"	229°50'22"	49°50'22"	42.08
28	29	82°30'53.40"	18°39'04.31"	173°11'26"	353°11'26"	68.36
29	30	82°30'53.65"	18°39'02.10"	241°19'37"	61°19'37"	157.22
30	31	82°30'48.92"	18°38'59.69"	241°42'27"	61°42'27"	154.11
31	32	82°30'44.27"	18°38'57.35"	236°02'14"	56°02'14"	124.6
32	33	82°30'40.73"	18°38'55.11"	209°59'48"	29°59'48"	136.6
33	34	82°30'38.36"	18°38'51.28"	247°15'57"	67°15'57"	81.37
34	35	82°30'35.79"	18°38'50.28"	252°49'56"	72°49'56"	49.53
35	36	82°30'34.17"	18°38'49.82"	244°47'18"	64°47'18"	33.99
36	37	82°30'33.12"	18°38'49.36"	223°08'46"	43°08'46"	134.26
37	38	82°30'29.96"	18°38'46.20"	188°32'42"	8°32'42"	144
38	39	82°30'29.19"	18°38'41.57"	222°24'43"	42°24'43"	212.45
39	40	82°30'24.25"	18°38'36.51"	150°05'58"	330°05'58"	64.4
40	41	82°30'25.33"	18°38'34.68"	155°15'37"	335°15'37"	47.66
41	42	82°30'26.00"	18°38'33.27"	140°49'56"	320°49'56"	25.3
42	43	82°30'26.54"	18°38'32.63"	116°58'58"	296°58'58"	94.22
43	44	82°30'29.39"	18°38'31.21"	122°49'58"	302°49'58"	57.99
44	45	82°30'31.05"	18°38'30.18"	117°05'44"	297°05'44"	57.48

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POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
45	46	82°30'32.79"	18°38'29.31"	228°21'29"	48°21'29"	24.01
46	47	82°30'32.17"	18°38'28.80"	288°06'06"	108°06'06"	123.95
47	48	82°30'28.16"	18°38'30.08"	281°44'09"	101°44'09"	77.73
48	49	82°30'25.57"	18°38'30.62"	287°13'37"	107°13'37"	187.48
49	50	82°30'19.47"	18°38'32.47"	289°09'34"	109°09'34"	77.57
50	51	82°30'16.98"	18°38'33.32"	215°43'19"	35°43'19"	54.83
51	52	82°30'15.88"	18°38'31.88"	225°38'26"	45°38'26"	75.23
52	53	82°30'14.03"	18°38'30.19"	249°45'30"	69°45'30"	58.42
53	54	82°30'12.15"	18°38'29.54"	241°50'31"	61°50'31"	47.63
54	55	82°30'10.71"	18°38'28.82"	247°14'41"	67°14'41"	85.46
55	56	82°30'08.01"	18°38'27.77"	246°08'07"	66°08'07"	107.49
56	57	82°30'04.65"	18°38'26.38"	234°58'34"	54°58'34"	87.78
57	58	82°30'02.18"	18°38'24.76"	241°14'32"	61°14'32"	66.71
58	59	82°30'00.17"	18°38'23.73"	235°45'43"	55°45'43"	102.37
59	60	82°29'57.27"	18°38'21.88"	236°57'41"	56°57'41"	20.55
60	61	82°29'56.68"	18°38'21.52"	253°53'34"	73°53'34"	23.46
61	62	82°29'55.91"	18°38'21.32"	268°01'07"	88°01'07"	30.14
62	63	82°29'54.88"	18°38'21.29"	276°59'29"	96°59'29"	18.23
63	64	82°29'54.26"	18°38'21.37"	291°29'36"	111°29'36"	52.79
64	65	82°29'52.59"	18°38'22.01"	294°31'02"	114°31'02"	29.91
65	66	82°29'51.67"	18°38'22.42"	283°03'29"	103°03'29"	47.26
66	67	82°29'50.10"	18°38'22.78"	266°16'34"	86°16'34"	27.91
67	68	82°29'49.15"	18°38'22.73"	257°40'21"	77°40'21"	53.87
68	69	82°29'47.35"	18°38'22.37"	254°49'36"	74°49'36"	24.92
69	70	82°29'46.53"	18°38'22.17"	263°06'32"	83°06'32"	42.44
70	71	82°29'45.09"	18°38'22.01"	273°59'53"	93°59'53"	50.62
71	72	82°29'43.37"	18°38'22.14"	272°25'40"	92°25'40"	46.76
72	73	82°29'41.77"	18°38'22.22"	304°05'07"	124°05'07"	61.28
73	74	82°29'40.05"	18°38'23.35"	269°31'20"	89°31'20"	18.08
74	75	82°29'39.44"	18°38'23.35"	247°41'42"	67°41'42"	133.87
75	76	82°29'35.20"	18°38'21.73"	245°18'55"	65°18'55"	40.46
76	77	82°29'33.94"	18°38'21.19"	251°16'34"	71°16'34"	27.76
77	78	82°29'33.04"	18°38'20.91"	267°17'53"	87°17'53"	20.35
78	79	82°29'32.34"	18°38'20.88"	252°58'12"	72°58'12"	47.14
79	80	82°29'30.80"	18°38'20.45"	239°44'44"	59°44'44"	28.64
80	81	82°29'29.95"	18°38'19.98"	231°35'44"	51°35'44"	133.68
81	82	82°29'26.36"	18°38'17.31"	227°51'56"	47°51'56"	79.64
82	83	82°29'24.33"	18°38'15.59"	261°03'50"	81°03'50"	102.03
83	84	82°29'20.88"	18°38'15.10"	254°49'45"	74°49'45"	46.72
84	85	82°29'19.34"	18°38'14.71"	257°04'15"	77°04'15"	58.62
85	86	82°29'17.39"	18°38'14.30"	267°52'42"	87°52'42"	55
86	87	82°29'15.51"	18°38'14.25"	284°13'10"	104°13'10"	62.29
87	88	82°29'13.46"	18°38'14.77"	290°46'24"	110°46'24"	93.74
88	89	82°29'10.47"	18°38'15.87"	266°58'09"	86°58'09"	70.87
89	90	82°29'08.06"	18°38'15.77"	276°46'17"	96°46'17"	25.05
90	91	82°29'07.21"	18°38'15.87"	319°53'29"	139°53'29"	62.58

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POINTS		GEOGRAPHIC CO-ORDINATES		BEARING		DISTANCE IN METERS
FROM	TO	LONGITUDE	LATITUDE	FORWARD	BACKWARD	
91	92	82°29'05.85"	18°38'17.44"	325°02'42"	145°02'42"	89.13
92	93	82°29'04.13"	18°38'19.83"	337°34'31"	157°34'31"	83.59
93	94	82°29'03.06"	18°38'22.35"	102°29'09"	282°29'09"	353.58
94	95	82°29'14.82"	18°38'19.77"	87°32'39"	267°32'39"	171.84
95	96	82°29'20.68"	18°38'19.96"	1°46'38"	181°46'38"	82.3
96	97	82°29'20.79"	18°38'22.64"	279°11'11"	99°11'11"	421.98
97	98	82°29'06.59"	18°38'24.94"	3°10'37"	183°10'37"	173
98	99	82°29'06.97"	18°38'30.56"	68°13'49"	248°13'49"	155.5
99	100	82°29'11.91"	18°38'32.40"	66°38'37"	246°38'37"	142.24
100	101	82°29'16.39"	18°38'34.19"	91°44'57"	271°44'57"	142.45
101	102	82°29'21.24"	18°38'34.01"	87°31'16"	267°31'16"	45.22
102	103	82°29'22.78"	18°38'34.07"	85°27'20"	265°27'20"	44.55
103	104	82°29'24.30"	18°38'34.17"	79°11'03"	259°11'03"	70.43
104	105	82°29'26.66"	18°38'34.58"	26°28'21"	206°28'21"	53.18
105	106	82°29'27.49"	18°38'36.12"	16°31'30"	196°31'30"	43.79
106	107	82°29'27.92"	18°38'37.48"	25°00'25"	205°00'25"	36.76
107	108	82°29'28.46"	18°38'38.56"	49°04'51"	229°04'51"	15.83
108	109	82°29'28.87"	18°38'38.90"	66°27'50"	246°27'50"	56.48
109	110	82°29'30.65"	18°38'39.62"	77°17'55"	257°17'55"	70.89
110	111	82°29'33.01"	18°38'40.10"	113°30'50"	293°30'50"	27.2
111	112	82°29'33.86"	18°38'39.74"	129°13'55"	309°13'55"	46.99
112	113	82°29'35.09"	18°38'38.77"	123°14'54"	303°14'54"	19.92
113	114	82°29'35.66"	18°38'38.41"	135°53'36"	315°53'36"	46.94
114	115	82°29'36.76"	18°38'37.30"	150°42'49"	330°42'49"	23.44
115	116	82°29'37.15"	18°38'36.64"	99°03'01"	279°03'01"	38.18
116	117	82°29'38.43"	18°38'36.43"	88°17'45"	268°17'45"	36.91
117	118	82°29'39.59"	18°38'36.46"	106°46'31"	286°46'31"	119.87
118	119	82°29'43.60"	18°38'35.30"	71°05'12"	251°05'12"	84.94
119	120	82°29'46.35"	18°38'36.17"	23°58'55"	203°58'55"	285.56
120	121	82°29'50.38"	18°38'44.63"	24°54'57"	204°54'57"	219.52
121	122	82°29'53.60"	18°38'51.08"	17°45'51"	197°45'51"	89.01
122	123	82°29'54.55"	18°38'53.83"	26°27'50"	206°27'50"	26.13
123	124	82°29'54.95"	18°38'54.59"	344°42'48"	164°42'48"	361.63
124	125	82°29'51.80"	18°39'05.96"	344°19'17"	164°19'17"	169.47
125	126	82°29'50.28"	18°39'11.28"	12°55'29"	192°55'29"	27.55
126	127	82°29'50.50"	18°39'12.15"	10°09'40"	190°09'40"	51.97
127	128	82°29'50.83"	18°39'13.81"	3°10'47"	183°10'47"	66.78
128	129	82°29'50.97"	18°39'15.98"	344°05'43"	164°05'43"	102.34
129	1	82°29'50.04"	18°39'19.19"	336°29'16"	156°29'16"	88.87
PERIMETER :13212.48 MTR & AREA: 249.40 HA.						

P:
Odisha

18/06/2022

BASE COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION) @ 1600 PLANTS PER HECTARE (18 months old seedling)						
Sl. No.	Items of work	Preferable Period of Execution	No. of Mandays	Labour Cost (in Rs.)	Material Cost (in Rs.)	Total Cost (in Rs.)
1	2	3	4	5	6	7
Nursery Cost						
1	Cost of raising 18 months old seedling including 10% casualty @1760 seedling per hectare	Before 2 (two) year of achievement year	219.12	68146.32	20398.40	88544.72
2	Cost of raising 18 months old seedling for casualty replacement @160 seedling per hectare	Before 01 year of achievement year	19.92	6195.12	1854.41	8049.53
Total						
0th Year (Advance Work) Pre-Planting Operation						
1.	Survey, demarcation and Pillar posting	Nov/Dec	2	622	0	622
2.	Preparation of Treatment Map (Digital Map)	Nov/Dec	1	311	100	411
3.	Site preparation (Cleaning & removal of debris)	Nov/Dec	12	3732	0	3732
4.	Creation of 4.00 mt. wide Inspection Path	Feb/Mar	1	311	0	311
5.	Alignment and stacking	Feb/Mar	2	622	0	622
6.	Digging of pits (45 cm x 45 cm x 45 cm) in hard and gravelly soil	Feb/Mar	64	19904	0	19904
7.	Construction of Temporary Labour Shed, Drinking water facility and Fire-st-Air etc.	Jan/Mar	0	0	3500	3500
	Total		82	25502	3600	29102
1st Year/ Planting Year						
1.	Refilling of pits by altering the dug-out soil of the pits, application of Organic compounds/ CDM/ FYM & mixing the same properly.	Jun/Jul	12	3732	8000	11732
2.	Transportation of 18 months old polypot seedlings in hired truck/ tractor from the permanent/ Mega nursery to planting site including Loading & unloading. (Average lead of 10 Rkm) & Stacking the seedling @ Rs. 6/- per Seedling. (1760 nos.)	Jul/Aug	0	0	10560	10560
3.	Watering the polypot seedlings at planting site	Jul/Aug	3	933	0	933
4.	Conveyance of polypot seedlings on head load from the stacking site to individual dugout pits within the planting site, applying insecticide, fertilizers & planting after scooping the soil with other applied materials & pressing the soil properly around the planted seedlings.	Jul/Aug	36	11196	0	11196

5.	Cost of Fertilizer & Insecticide (a) NPK/ Bio-fertilizer @ 50 gms/ plant as basal dose = 80 kg @ Rs. 30/- per kg = Rs. 2400.00 (b) Urea/ Vermicompost/ Mo Khata/ any other fertilizer in two subsequent doses @ Rs. 1,200.00 (c) Insecticide/ Bio-pesticide @ 5 gms/ plant = 8 kg @ Rs. 150/- per kg = Rs. 1200.00	Jul/Aug	0	0	4800	4800
6.	Casualty Replacement @ 10% (160 nos.)	Jul/Aug	4	1244	0	1244
7.	1 st weeding & Manuring	Aug/Sept	15	4665		4665
8.	2 nd Weeding, Soil working (1mt. diameter around the plants) and Manuring.	Oct/Nov	20	6220	0	6220
9.	Fire line tracing (2m. wide fire line over 400 m long) including maintenance of inspection path.	Feb/Mar	3	933	0	933
10.	Watch & Ward including watering as per requirement	Aug-Mar	12	3732	0	3732
	TOTAL		105	32555	23360	56015
2nd Year Maintenance						
1.	Transportation of 160 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs. 6/- per seedlings	Jul	0	0	960	960
2.	Casualty replacement- 10%	Jul	4	1244	0	1244
3.	Cost of Fertilizer & Insecticide A) Cost of Insecticide/ Bio-pesticide @ 5 gms/plant = 0.8 Kg @ Rs. 150/- per kg = Rs. 120/- B) Urea/ NPK/ Bio-fertilizer/ Vermicompost/ Mo Khata/ any other fertilizer @ Rs. 4486/-	Aug/Sept	0	0	4606	4606
4.	Weeding (Complete weeding), Manuring & Soil working (1mt. diameter around the plants)	Sept/Oct	20	6220	0	6220
5.	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
6.	Watch & Ward including watering as per requirement	Apr-Mar	18	5598	0	5598
7.	Maintenance of Temporary Labour Shed, Drinking water facility and First-Aid etc.				1000	1000
	Total		45	13995	6566	20561
3rd Year Maintenance						
7.	Cost of Fertilizer Urea/ NPK/ Bio-fertilizer/ Vermicompost/ Mo Khata/ any other fertilizer	Sept/Oct	0	0	4486	4486
8.	Weeding, Manuring & Soil working (1mt. diameter around the plants)	Sept/Oct	20	6220	0	6220
9.	Fire line tracing (2 m wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
10.	Watch & Ward including watering as per requirement	Apr/Mar	18	5598	0	5598
11.	Maintenance of Temporary Labour Shed, Drinking water facility and First-Aid etc.	Apr/Mar			1000	1000
	Total		41	12751	5486	18237

4 th Year Maintenance						
1	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
2	Watch & Ward	Apr-Mar	18	5598	0	5598
	Total		21	6531	0	6531
5 th Year Maintenance						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
6 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933.0
2.	Pruning of branches, Singling out of multiple shoots	Jan/Mar	5	1555.00	0	1555.0
3.	Watch & Ward	Apr-Mar	18	5598.00	0	5598.0
	Total		26	8086	0	8086.0
7 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
8 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
9 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2.	Watch & Ward	Apr-Mar	18	5598.00	0	5598
	Total		21	6531	0	6531
10 th Year Maintenance						
1.	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933	0	933
2.	Watch & Ward	Apr/Mar	18	5598.00	0	5598
	Total		21	6531	0	6531

Year wise Abstract of Cost Norm (Showing seedling cost separately)							
Sl. No.	Year	No. person days	Labour Cost @ Rs. 311/- per day	Material Cost	Monitoring Evaluation, Learning, Documentation and Other Contingency (5%) of (4+5)	Cost of Seedlings	TOTAL COST
1.	0 th Year	82	25502	3600	1398.00	0	30500.00
2.	1 st Year	105	32655	23360	2800.00	88545	147360.00
3.	2 nd Year	45	13995	6566	1028.00	8050	29639.00
4.	3 rd Year	41	12751	5486	911.00	0	19148.00
5.	4 th Year	21	6531	0	326.00	0	6857.00
6.	5 th Year	21	6531	0	326.00	0	6857.00
7.	6 th Year	26	8086	0	404.00	0	8490.00
8.	7 th Year	21	6531	0	326.00	0	6857.00
9.	8 th Year	21	6531	0	326.00	0	6857.00
10.	9 th Year	21	6531	0	326.00	0	6857.00
11.	10 th Year	21	6531	0	326.00	0	6857.00
	Total	425	132175	39012	8497	96595	276279.00

Matrix for Model-I-B Conventional CA Plantation (AR) 1600 plants per Ha.

Sl. No.		Commencement Year	In Rupees																		Total Cost (10 Years)
Base Norm			I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	Total
1	2023-24	30500	30500	147560	20639	29148	6857	6857	8490	6857	6857	6857									310116
2	2024-25	30500	30500	154728	32674	22106	8335	8751	11377	9648	10131	10637	11169	11727							325622
3	2025-26	30500	30500	162464	34300	23274	8752	9100	11946	10380	10938	11599	12269								341902
4	2026-27	30500	30500	170587	36023	24438	9190	9648	12563	10637	11170	11729	12315	12929							358397
5	2027-28	30500	30500	179116	37874	25660	9650	10130	13460	11369	11913	12509	13115	13739	14375						376947
6	2028-29	30500	30500	188072	39732	26755	10443	10938	14290	12350	12918	13526	14151	14785	15425	16070					396799
7	2029-30	30500	30500	197476	41701	27899	10796	11377	15246	13608	14193	14818	15463	16118	16783	17458	18143				415586
8	2030-31	30500	30500	207350	43776	29072	11071	11677	16275	14785	15380	16015	16670	17325	17990	18665	19350				434565
9	2031-32	30500	30500	217694	45916	30298	11369	11985	17360	15970	16585	17220	17865	18520	19185	19860	20545				453785
10	2032-33	30500	30500	228518	48124	31569	11670	12296	18694	17325	17960	18615	19280	19955	20640	21335	22040				473266

Sd/-

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ANNEXURE - (E)

Fencing for Compensatory Plantation raised outside the Forest Areas using Angle Iron & Chain Link wire mesh
(250 Rmt/Ha.)

SL No	Item of work	Preferable Period of Execution	Man. days	Wages	Material cost	Total Cost (Rs. per Ha.)
0 th Year (PPO)						
1	Earth work (Excavation of hole) in Hard soil at a distance 3 mt. $0.40m \times 0.40m = 0.064 \times 84 = 5.376$ cum @ Rs.140/cum = Rs.753.		2.42	752.62	0.0	752.6
2	Cement concrete (1:4:8) using 40 mm BHC metal $84 \times 0.40m \times 0.10m = 1.344 \times 3755.94/cum$		0	0	5,047.4	5,047.4
3	Angle iron pole of size 50mm X 50 mm X 6mm of height 2.40 mt. $84 \times 2.40 = 201.60$ Sqmt. @ 4.50/kg/Sqmt. = 907.20 kg @ 69.50 per kg				63,050.0	63,050.0
4	Cement Concrete (1:2:4) for fixing the iron angle pole using 12mm BHC Chips $84 \times 0.40m \times 0.40m \times 0.30m = 4.032$ cum @ 5486.77/cum				22,123.0	22,123.0
5	Cost of Chain link mess using 4mm Dia GI wire having gap size 50mm X 50mm $250 \text{ Rmt} \times 2.10 \text{ mt} = 5255 \text{ q. mt} \times 331/\text{Sqmt} = \text{Rs.} 1,73,775$				1,73,775.0	1,73,775.0
6	Double coat painting of iron angle pole over a coat of primer using good quality enamel paint $84 \times 2.10 \times 0.20 = 35.28$ Sqmt. @ Rs.108.80/Sqmt				3,838.0	3,838.0
7	Painting of GI chain link mess $250 \times 2.10 \times 2 = 1050/10 = 105$ Sqmt. @ 108.80 Sqmt.				11,424.0	11,424.0
8	Transportation of Chain link mess, iron angle, Straightening & tying of chain link mess etc. @ 2% of the total cost.				5,600.0	5,600.0
	Total		2.42	752.62	2,84,857.4	2,85,610.0

Rate per running mt. $2,85,610/250 = \text{Rs.} 1142/\text{Rmt}$ 1st Year Maintenance

1	No Maintenance is required	Sept / Oct	0	0	0	0
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2nd Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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3rd Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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4th Year Maintenance

1	Maintenance of wire mess fence @ 1% per running* mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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5th Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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6th Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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7th Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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8th Year Maintenance

1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. $1142 \times 1\% = 1142$ say Rs.11	Sept / Oct	0	0	11000	11000
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9th Year Maintenance						
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
10th Year Maintenance						
Sl. No	Item of work	Preferable Period of Execution	Man days	Wages	Material cost	Total Cost (Rs. per Ha.)
1	Maintenance of wire mess fence @ 1% per running mt. cost of installation in 1 st yr. 1142 x 1% = 1142 say Rs.11	Sept / Oct	0	0	11000	11000
Abstract						
Sl. No	Year	No. person days	Labour cost @ Rs.311/- per days	Material Cost	Total cost (Rs.)	
1	0th year	2.42	752.6	284857.4	285610.0	
2	1 st year	0.0	0.0	0.0	0.0	
3	2 nd year	0.0	0.0	11000.0	11000.0	
4	3 rd year	0.0	0.0	11000.0	11000.0	
5	4 th year	0.0	0.0	11000.0	11000.0	
6	5 th year	0.0	0.0	11000.0	11000.0	
7	6 th year	0.0	0.0	11000.0	11000.0	
8	7 th year	0.0	0.0	11000.0	11000.0	
9	8 th year	0.0	0.0	11000.0	11000.0	
10	9 th year	0.0	0.0	11000.0	11000.0	
11	10 th year	0.0	0.0	11000.0	11000.0	
Total		2.42	752.62	383857.4	3,84,610.0	

See

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Enclosure

Matrix for Fencing Model-F-II (Iron angle with Chainlink weir mesh)

In Rupees

Sl. No.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	Total Cost
1	2012-22	208630	0	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050	11050
2	2012-23	286610	0	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120	12120
3	2012-24		259951	0	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732	12732
4	2012-25			314866	0	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369	13369
5	2012-26				347162	0	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037	14037
6	2012-27					364520	0	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738	14738
7	2012-28						382748	0	15436	15436	15436	15436	15436	15436	15436	15436	15436	15436	15436	15436	15436	15436
8	2012-29							401883	0	16258	16258	16258	16258	16258	16258	16258	16258	16258	16258	16258	16258	16258
9	2012-30								421977	0	17063	17063	17063	17063	17063	17063	17063	17063	17063	17063	17063	17063
10	2012-31									443076	0	17918	17918	17918	17918	17918	17918	17918	17918	17918	17918	17918

See

ANNEXURE - (F)

SMC Works Model-C

Cost Norms for creation of Compensatory Afforestation with stabilization of Soil & Conservation of Moisture (1000 Plants/ Ha).

Sl. No.	Items of work	Preferable Period of Execution	Total Cost
0th Year (Pre-Planting Operation)			
8.	Nil		0
1st Year			
9.	Soil Conservation measure structures like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LB CD, Wire mesh LB CD, Sub surface Dyke & WHS as per the slope & site requirement on LS	Apr/Sept	20.215
2nd Year			
0.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
3rd Year			
1.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
4th Year			
2.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
4th Year			
1.	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3.032
Total			32,343.0

Abstract

Sl. No.	Year	No. person days	Labour Cost @ Rs. 311/- per day	Material Cost	TOTAL COST (Rs). Considered in the Matrix
1.	0 th Year	0.0	0.0	0.0	0.0
2.	1 st Year	0.0	0.0	20,215.0	20,215.00
3.	2 nd Year	0.0	0.0	3,032.00	3,032.00
4.	3 rd Year	0.0	0.0	3,032.00	3,032.00
5.	4 th Year	0.0	0.0	3,032.00	3,032.00
6.	5 th Year	0.0	0.0	3,032.00	3,032.00
Total		0.00	0.00	32,343.0	32,343.0

Signature
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 Power
 Odisha

Matrix for (SMC)

Sl. No.	Commencement Year	In Rupees																
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
Base Norm		0	20215	3032	3032	3032	3032											
1	2021-22	0	21226	3342	3510	2685	3870											35633
2	2022-23		0	22287	3509	3686	3869	4064										37415
3	2023-24			0	23401	3684	3870	4062	4267									39284
4	2024-25				0	34571	3858	4064	4265	4480								41248
5	2025-26					0	25800	4061	4267	4478	4704							43310
6	2026-27						0	27090	4264	4480	4702	4939						45475
7	2027-28							0	28445	4477	4704	4937	5186					47749
8	2028-29								0	29857	4701	4939	5184	5445				50136
9	2029-30									0	31360	4636	5186	5443	5717			52642
10	2030-31										0	32928	5183	5445	5715	6003		55274

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SMC

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Water Model-W-I			
Water provision to CA Plantation			
Solar system with Bore well (1 system for 5 Ha. Plantation) fitted with Drip system			
Year of Installation (0 th Year)			
1	Cost of Borewell	1,50,000	
2	Installation of Solar panel & other System	3,00,000	
3	Cost of 0.5 HP submersible motor with accessories	50,000	
4	Water Storage Tanks/ Flexible pipes	15,000	
5	Cost of laying Drip system including all accessories, fitting etc. with 12% GST	3,02,431	
Total		8,17,431	
6	Cost of Water & watering per Ha. $(8,17,431/5) = \text{Rs. } 1,63,486$		1,63,486
1 st Year Watering			
7	No maintenance required		0
Total			0
2 nd Year Watering			
8	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
3 rd Year Watering			
9	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
4 th Year Watering			
10	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174
5 th Year Watering			
11	Maintenance of system @ 5% of initial cost of installation		8,174
Total			8,174

Abstract					
Sl. No.	Year	No. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.) Considered in the Matrix
1	0 th Year	0	0.0	163486.0	163486.0
2	1 st Year	0	0.0	0.0	0.0
3	2 nd Year	0	0.0	8174.0	8174.0
4	3 rd Year	0	0.0	8174.0	8174.0
5	4 th Year	0	0.0	8174.0	8174.0
6	5 th Year	0	0.0	8174.0	8174.0
Total		0	0.0	196182	1,96,182

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Matrix for Watering W1 (Solar Borewell) fitted with Drip System (per Ha)

Sl. No.	Common cement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
Base Norm		163486	0	8174	8174	8174	8174											202327
1	2021-22	163486	0	9011	9463	9935	10432	10954										212444
2	2022-23		171660	0	9462	9936	10432	10954	11502									223067
3	2023-24			180243	0	9935	10433	10954	11502	12077								234221
4	2024-25				189255	0	10432	10955	11502	12077	12681							245933
5	2025-26					198718	0	10954	11503	12077	12681	13315						258230
6	2026-27						208654	0	11502	12076	12681	13315	13981					271142
7	2027-28							219887	0	12077	12682	13315	13981	14680				284699
8	2028-29								230041	0	12681	13316	13981	14680	15414			298934
9	2029-30									241543	0	13315	13982	14680	15414			313881
10	2030-31										253620	0	13981	14681	15414	16185		

See

For more information
Odia Mining Corporation Ltd.
Bhubaneswar

TOTAL COST OF THE COMPENSATORY AFFORESTATION SCHEME

Sl. No.	Item of Work	Total Estimated Cost in Rs.
Chain link weir mesh fencing		
1	Chain link weir mesh fence around plantation sites @ Rs. 4,40,299/- per 250 Rmt/Ha So, fencing required over 13212.48 Rmt/250=52.85 ha Rs 4,40,299/- X 52.85 ha=2,32,69,802.15	2,32,69,802.15
Sub-total:		2,32,69,802.15
Plantation		
2	Block plantation @ 1600 plants per ha in Pokres over 249.40 ha X Rs. 325622/-	8,12,10,126.80
Sub-total:		8,12,10,126.80
Soil Moisture conservation activities		
3	Soil conservation measure structures like staggered trench, percolation pit, contour trench, graded earthen bund, LBCD, wire mesh, LBCD, Sub surface Dyke and Water Harvesting structures as per the Guideline by PCCF, Odisha vide letter dt. 08.11.2021 = 249.40 ha X Rs. 37415/-	93,31,301.00
Sub-total:		93,31,301.00
7	Water provision to CA Plantation: Solar system with Bore well (1 system for 5 Ha. Plantation) fitted with Drip system= Rs. 212444/- X 249.40 ha	5,29,83,533.60
Sub-total:		5,29,83,533.60
Total		16,67,94,763.55 Or 16,67,94,800.00

(Rupees Sixteen crore sixty seven lakh ninety four thousand eight hundred) only

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Project Officer
Odisha Mining Corporation Ltd.
Bhubaneswar

Divisional Forest Officer,
Jeypore Forest Division