

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS, ODISHA, BHUBANESWAR

No. Dated, Bhubaneswar the /9F (MG) 380/2019 September, 2020

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From:

Jitendra Kumar, IFS
Principal CCF (FD & NO, FC Act),
O/o the PCCF, Odisha, Bhubaneswar,
Odisha.

To

The Assistant Inspector General of Forest (F.C),
Government of India,
Ministry of Environment, Forests & Climate Change (F. C. Division),
Indira Paryavaran Bhawan, Aliganj, Jor Bagh Road,

New Delhi- 110003.

Sub:- Proposal for diversion of 783.275 ha of forest land consisting of 643.095 ha of RF in Chhedipada & Kankurpal Reserved Forest and 140.180 ha of village forest land in Chhendipada Range of Angul Division for Naini Coal Block (Open Cast) under Angul District Odisha of M/s Singareni Collieries Company Ltd. (SCCL)

Sir,

In inviting a reference to the letter F.No.8-01/2020-FC dated 17.04.2020 of Government of India, MoEF & CC, New Delhi, the compliance to the observations of Gol, MoEF & CC, New Delhi on the diversion proposal have been furnished by DFO Balangir and DFO Boudh Forest Division. The details of the pointwise compliance is furnished below:

Observation (i): With regard to proposed CA towards instant proposal, the following observation are made:

a. An area of 1683.00 ha of degraded forest land instead of admissible 1566.55 ha (783.275 ha X 2) of degraded forest land has been proposed in lieu of proposed diversion of 783.275 ha of forest land. Thus, an additional area of 116.45 ha (1683 ha – 1566.55 ha) degraded forest land has been indentified for CA purpose. Exact Degraded forest area should be identified and KML file of the same be submitted accordingly. However, out of total proposed degraded forest land of 1683.00 ha, 57.0 ha (22 ha in Goudadei RF, Boudh Forest Division and 35 ha in Tikhari RF, Balangir Forest Division) is MDF which is not suitable and admissible for CA purpose in accordance with guideline issued by this Ministry.

b. RO in Site Inspection Report (SIR) mentioned that the proposed CA areas do not require planting of 800 seedlings in ANR model due to presence of existing regeneration and tree species with some canopy cover. The observation shall be analyzed and comments may be furnished accordingly.

c. As per Google earth imagery, Plantation activities in the following area in past have been carried out in one CA patch namely Goudadei RF under Boudh Range:

Plantation location	Approx. area (in ha)	Latitude	Longitude
Site-1	6.6	20° 45'51.79" N	84º 14'3.87" E
Site-2	3.2	20° 45'43.93" N	84 ⁰ 14'8.85" E
Total	9.8		07 17 0.03 L

As above, Goudadei RF patch of 541.0 ha identified for CA, wherein an area of 9.8 ha is showing planted earlier. Same need to be checked and report in this regards shall be submitted.

Based on the above observations, the State Government is requested to review the proposed sites for CA towards instant proposal and to exclude 57.0 ha MDF and 9.8 ha of earlier planted area from proposed CA. The revised admissible CA land, alongwith a certificate from the state Government that no afforestation work has been taken up in the proposed CA site under any scheme/plan in the past, may be furnished to this Ministry for further action.

Compliance: In compliance to the above, the DFO Balngir and Boudh Forest Division have reported that the MoEF & CC, Government of India vide letter F. No.11-423/2011-FC dated 31.01.2013 has accorded status of Central Public Sector Unit to M/s SCCL for the purpose of creation of Compensatory Afforestation in respect of the proposal seeking prior approval of Central Government in accordance with Section-2 of Forest (Conservation) Act, 1980 for diversion of forest land for Coal Mining and allied activities. As per Para-2.5 (i) (f) of Handbook of guideline and clarifications on the Forest (Conservation) Act, 1980 issued vide letter F.No.5-2/2017-FC dated 28.03.2019, CA shall be raised and maintained at the cost of user agency on degraded forest land twice in extent of the forest area diverted. Therefore, 1566.55 ha (783.275 ha X 2) or 1567.0 ha of degraded forest land is required in lieu of diversion of 783.275 ha of forest land of this project.

The proposal involves diversion of 783.275 ha of forest land in Angul Forest Division. As degraded forest land with canopy density less than 0.4 is not available in Angul Forest Division, an area of 1683.0 ha of degraded forest land comprising of 1083.0 ha of degraded forest land (Bankamundi RF 542.0 ha + Goudadei RF 541.0 ha) in Boudh Forest Division and 600.0 ha degraded forest land in Tikhari RF of Balangir Forest Division had been identified for Compensatory Afforestation for Naini Coal Block (Open Cast) under Angul District Odisha of M/s Singareni Collieries Company Ltd.

The Government of India, MoEF & CC, New Delhi has observed that the identified CA area is more than the required area and has directed that the CA area should be the exact required area i.e., 1566.55 ha or 1567.0 ha.

(a) The GoI, MoEF & CC, New Delhi has observed that 35.0 ha of land is MDF out of 600.0 ha of degraded forest land identified in Tikhari RF of Balangir Forest Division. The DFO Balangir Forest Division has reported that after excluding 35.0 ha of MDF, the balance area is now coming under open forest category as per DSS analysis and 800 plants per ha can be accommodated in the area.

Therefore, the revised admissible CA area identified in Tikhari RF of Balangir Division is 565.0 ha (600.0 ha – 35.0 ha MDF).

The CA map duly authenticated by DFO Balangir Division is enclosed as Annexure-1. The KML & Shape file of CA land in CD form is also enclosed as Annexure-2.

The DFO Balangir Forest Division has furnished a certificate that no plantation has been carried out in the past over the identified area. The copy of the certificate at Point (C) of memo No.2447 dated 19.06.2020 of DFO Balangir Forest Division is enclosed as **Annexure-3**.

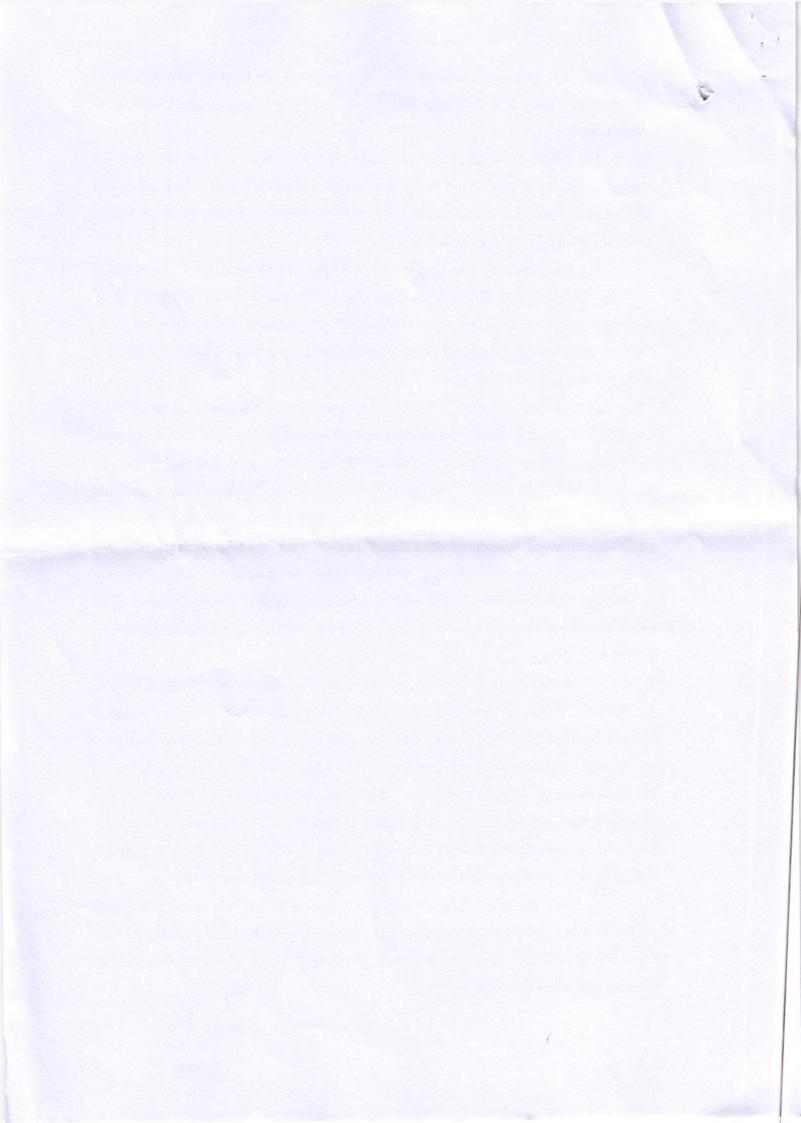
The compensatory afforestation scheme has been prepared by DFO Balangir Division for taking up ANR with gap plantation @ 800 plants per ha over 565.0 ha of degraded forest land identified in Tikhari RF of Balangir Forest Division with 10 years maintenance alongwith provision of vegetative fencing around the plantation which is enclosed as Annexure-4.

The revised financial outlay of compensatory afforestation scheme over 565.0 ha of degraded forest land identified in Tikhari RF in Balangir Forest Division has been technically approved by PCCF (FD & NO, FC Act) for Rs.8,05,47,500/- at the current wage rate of Rs.303.40 per MD which is enclosed as **Annexure-4A**.

(b) Further, the GoI, MoEF & CC, New Delhi has observed that 541.0 ha of CA land identified earlier in Goudadei RF under Boudh Forest Division contains 22.0 ha MDF which is not suitable and admissible for compensatory afforestation in accordance with guidelines issued by GoI, MoEF & CC, New Delhi and plantation activities has been carried out over a patch of 9.8 ha within 541.0 ha identified for CA in Goudadei RF.

As reported by DFO Boudh Forest Division after excluding 22.0 ha MDF area and 9.8 ha of plantation area from 541.0 ha of CA land identified earlier in Goudadei RF and taking into consideration about presence of existing regeneration and tree species with some canopy cover, an area of 460.0 ha in Goudadei RF is included in the compensatory afforestation area which can accommodate 800 Plants / ha. Therefore, the total revised admissible CA area identified in Boudh Forest Division is 1002.0 ha (Bankamundi RF 542.0 ha + Goudadei RF 460.0 ha). The CA area of 1002.0 ha is now coming under open forest category as per DSS analysis.

The geo-referenced digitized map of CA area over 542.0 ha degraded forest land in Bankamundi RF of Boudh Forest Division duly authenticated by DFO Boudh Forest Division is enclosed as **Annexure-5**. The KML / Shape file of CA land in CD form is enclosed as **Annexure-6**.



The geo-referenced digital map of CA area over 460.0 ha of degraded forest land in Goudadei RF of Boudh Forest Division duly authenticated by DFO Boudh Forest Division in enclosed as **Annexure-7**. The KML/ Shape file of CA land is enclosed as **Annexure-6**.

The DFO Boudh Forest Division has furnished a certificate that no plantation has been carried out in the past over the revised identified area. The copy of the certificate at Point (C) of memo No.2939 dated 08.07.2020 of DFO Boudh Forest Division is enclosed as **Annexure-8**.

A compensatory afforestation scheme has been prepared by DFO Boudh Forest Division for taking up ANR with gap plantation @ 800 plants per ha over 1002.0 ha (542.0 ha in Bankamundi RF + 460.0 ha in Goudadei RF) of degraded forest land with 10 years maintenance alongwith vegetative fencing around the plantation and provision of soil conservation measures like LBCD (Loose Boulder Check Dam) & staggered trenches which is enclosed as Annexure-9.

The financial outlay of the compensatory afforestation scheme over 1002.0 ha of degraded forest land identified in Bankamundi RF (542.0 ha) & Goudadei RF (460.0 ha) under Boudh Forest Division has been technically approved by PCCF (FD & NO, FC Act) for Rs.15,24,42,700/- at the current wage rate of Rs.303.40 per manday which is enclosed as Annexure-10.

Hence, the total revised admissible CA land identified is 1567.0 ha comprising of 1002.0 ha of degraded forest land (Bankamundi RF 542.0 ha + Goudadei RF 460.0 ha) in Boudh Forest Division and 565.0 ha of degraded forest land in Tikhari RF of Balangir Forest Division for diversion of 783.275 ha of forest land for Naini Coal Block (Open Cast) under Angul District Odisha of M/s Singareni Collieries Company Ltd. (SCCL).

Observation (ii): It is also observed that the whole area on both sides of State Highway No.63 upto Deogarh Division has coal reserves and many coal mines may come up in future and movement of wild elephants is often witnessed in the northern and southern part of lease area, as reported. In this regards, the comments of CWLW of State may be furnished.

Compliance: In compliance to the above, the comments of PCCF (WL & CWLW), Odisha furnished vide letter No.5850 dated 16.07.2020 (copy enclosed as Annexure-11) is furnished below:

The elephant-rich Angul Forest Division has witnessed many man-animal conflicts due to fragmentation of dense forests owing to mining, industrialization and rapid urbanization. No mitigative measures are full proof enough to guarantee zero casualty to wild animals and collateral damage to human life and property.

The DFO, Angul Forest Division in the Site Inspection Report has reported about the movement of elephants in northern and southern part of lease area apprehending man-animal conflicts in adjoining villages.

To scale down the impact locally, the DFO, Angul Forest Division has recommended for implementation of a mitigative plan addressing the issues of minimizing the man-animal conflict and providing safe passage for elephants. The Regional CCF, Angul Circle in his memo No.2229 date d13.07.2020 (copy enclosed as **Annexure-12**) has also endorsed the views of the DFO, Angul Forest Division.

Besides this, as a large area of Chhedipada Range falls under coal bearing zone which would invite number of miner in future it would be better if Wildlife Institute of India/ Indian Institute of Science or some National Level Institute is asked to prepare a Comprehensive Elephant Management Plan to mitigate adverse impacts of coal mining on elephant population, their movements etc. for entire coal bearing belt encompassing areas of Chhendipada, Kaniha, Jarpada Ranges of Angul Forest Division and Reamal Range of Deogarh Forest Division alongwith adjoining continuous forest areas. The cost of such plan can be apportioned among the coal mines as and when allotted in the area.

In view of the above, the compliances to the observations raised by Government of India, Ministry of Environment & Forests, New Delhi vide letter F.No.8-01/2020-FC dated 17.04.2020 in respect of diversion of 783.275 ha of forest consisting of 643.095 ha of RF in Chhendipada & Kankurupal Reserved Forest and 140.180 ha of village forest land in Chhendipada Range of Angul Forest Division for Naini Coal Block (Open Cast) under Angul District Odisha of M/s Singareni Collieries Company Ltd. sent herewith for approval under Section-2 (ii) of Forest (Conservation) Act, 1980.

Encl: As above (one set)

Yours faithfully

Principal Chief Conservator of Forests Forest Diversion & Nodal Officer, F.C. Act

Memo No. 5535

Dt. 04-9-2020

Copy alongwith its enclosures forwarded to the Additional Chief Secretary to Government, Forest & Environment Department, Government of Odisha, Bhubaneswar for information and necessary action with reference to Memo No.10F(Cons)123/19-8004/F&E dated 26.05.2020.

Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Memo No.

/Dt.

Copy forwarded to the Regional Chief Conservator of Forests, Angul Circle for information and necessary action with reference to his Memo No.2229 dated 13.07.2020.

Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Memo No.

/Dt.

Copy forwarded to the Division Forest Officer, Angul Forest Division for information and necessary action with reference to his Memo No.4154 dated 06.07.2020.

Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Memo No.

/Dt.

Copy forwarded to the Division Forest Officer, Bolangir Forest Division for information and necessary action with reference to his memo No.2447 dated 19.06.2020.

Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

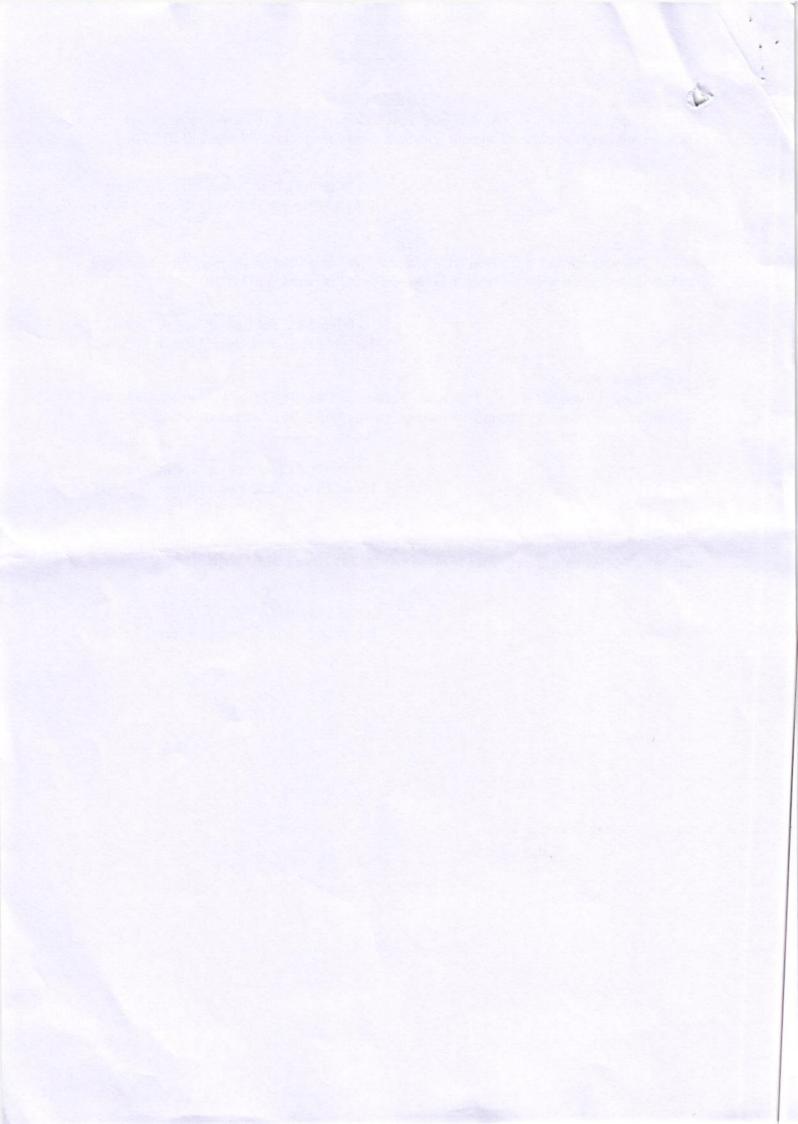
Memo No.

/Dt.

Copy forwarded to the Division Forest Officer, Boudh Forest Division for information and necessary action with reference to his memo No.2939 dated 08.07.2020.

Principal Chief Conservator of Forests Forest Diversion & Nodal Officer, F.C. Act

04/9/20







OFFICE OF THE DIVISIONAL FOREST OFFICER: BALANGIR FOREST DIVISIONAT / PO / DIST :- Balangir- ODISHA Phone & Fax - 06652-232948 (O), Email - dfobalangir@gmail.com

Memo No 2447 AF-Misc Dated, Bolangir the th June 2020.

To

The Principal Chief Conservator of Forests, Forest diversion & Nodal Officer, F.C.Act.

Odisha, Bhubaneswar.

Sub:

Proposal for diversion of 783.275 ha, of forest land consisting of 643.095 ha, of R.F in Chhendipada & Kankurupal Reserve Forest and 140.180 ha. 0f village Forest land in Chhendipada Range of Angul Division for Naini Coal Block (Open Cast) under Angul District, Odisha of M/S Singareni Collieries Company Ltd.

Ref:

Your memo No.11654 dt.17.6.2020.

In inviting a reference to the above cited memo, it is to intimate you that the pointwise compliance report as raised by the Govt. of India, MoEF & CC, New Delhi vide their letter F No.8-01/2020-FC dt.17.4.2020 relating to the above project is furnished below.

1 a-The total forest land involved in Naini Coal Block is 783,275 ha.for which 1566.55 ha. of degraded forest land is required for Compensatory Afforestation out of which 600 ha. of degraded forest was identified and a scheme prepared and submitted earlier. Out of the total, 35 ha. of land in Tikhari RF is MDF which is not suitable and admissible for Compensatory Afforestation purpose in accordance with guidelines by the Ministry of MoEF & CC, New Delhi. Now after excluding the above MDF patches of 35 ha, the KML/Shape file of 565 ha. CA Map is enclosed herewith after authentication for onward transmission to the Govt. of India, MoEF & CC, New Delhi.

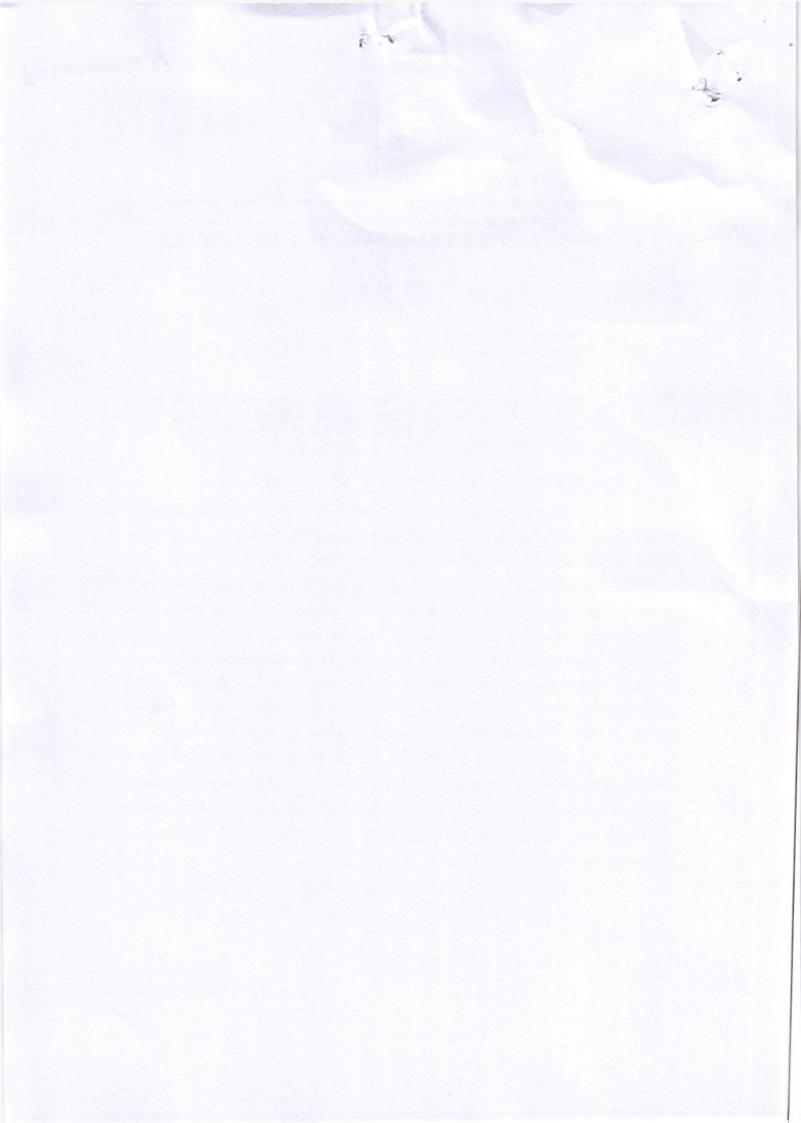
 After deducting 35 ha. of MDF the balance area is now coming under open forest category as per DSS and 800 plants can be accommodated over the area. The Compensatory Afforestation Scheme with a financial outlay of Rs.7,92,46,600/-(Rupees Seven Crore Ninty Two Lakhs Forty Six thousand Six hundred)only over 565 ha. of degraded forest land was approved by the PCCF, FD & Nodal Officer, FC Act.

e. No plantation has been carried out in the past over the identified area.

This is for favour of your information and necessary action.

Encl: As above

Divisional Forest Officer Bolangir Forest Division



Memo No.	/4F, Dtd.	1	
Copy forwarded to the	Regional Chief Conservato	or of Forests, Bhawanipatna Circle for favour o	f his
information and neces	sary action with reference to	o memo No.11655 dt.17.6.2020 of the PCCF, Fe	orest
Diversion and Nodal (Officer,F.C.Act.O/O the PCC	F,Odisha,Bhubaneswar.	
		Divisional Forest Of Bolangir Forest Divi	
Memo No	/4F, Dtd.	1	
Copy forwarded to the	General Manager, M/S Sing	gareni Collieries Company Limited(SOCL)H.No	.129
	ngul 759122 for his informat		
		1	

Divisional Forest Officer Bolangir Forest Division

SCHEME FOR COMPENSATORY AFFORESTATION OVER

600 HA. IN DEGRADED FOREST LAND AT
TIKHARI RESERVE FOREST

IN

BOLANGIR FOREST DIVISION

@ Re 303. 40 per MD.

AGAINST DIVERSION OF FOREST LAND FOR PROPOSED 784 HA. NAINI COAL MINE IN ANGUL DISTRICT ALLOCATED IN FAVOUR OF THE SINGARENI COLLIERIES COMPANY LTD (SCCL), ANGUL, ODISHA (A GOVT. OF INDIA MINING COMPANY)

Modified by Divisional Forest Officer Angul Forest Division

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06	Surveyed map	ENCLOSED

Land Suitability Certificate

565.0

This is to certify that 600 ha of degraded forest land in Tikhari R.F of Muribahal Range in Bolangir Forest Division identified for Compensatory Afforestation is suitable for plantation from management point of view and is free from encroachments and encumbrances.

Divisional Forest Officer Division Bolangir Division Bolangir Forest Division

Place :

Date :

SCHEME FOR COMPENSATORY AFFORESTATION 600 HA IN DEGRADED FOREST LAND AT TIKHARI RESERVE FOREST IN MURI BAHAL RANGE OF BOLANGIR FOREST DIVISION, BOLANGIR DIST OF ODISHA

01. INTRODUCTION:

It is reported that, the Singareni Collieries Company Ltd., (SCCL) is the oldest Govt. Mining Company working in the State of Telengana and having a history of 127 years experience in coal mining. SCCL is a Govt. Company with equity participation of Telengana state and Government of India in the ratio of 51.49 respectively. SCCL is presently operation 16 open cast and 31 underground mines with manpower of 58.390.

SCCL diversified into power generation and established 2x600 MW power plants (STPP) in the Manchiriyal District of Telengana. The STPP was dedicated to the Nation by our Honourable Prime Minister on 07.08.2016. Another unit of 600 MW power plants is under construction.

Ministry of coal GOI allotted Naini Coal Mine for meeting the coal requirement of STPP. Nominated Authority Ministry of coal. GOI vide order No.103/211201s/NA dt. 13.08.2015 allotted Naini Coal Mine in the state of Odisha to SCCL for end use kin STPP. Naini coal mine spans over an area of 9.12 sq. km between Latitude 20° 48′ 07″ and 21° 07′ 07″ North & Longitude 84° 52′ 56″ & 84° 53′ 06″ East Naini Coal Mine is covered under Survey of India Toposheet No.73 C/16 on RF 1: 50000 special topo sheet Nos.L-11 & M-11 on the RF 1:10000 and falls within Angul district of Odisha. Total geological reserves estimated is 455 18 Million tonnes (Mt) up to a depth of 550 m. Rated capacity of coal production is 10.0 MTPA.

Naini Coal Mine comprises an area of 912.789 Ha out of which RF area is 643.095 Ha & village forest area is 140.180 Ha which is also required to be diverted under Forrest (Conservation) Act. The total forest area to be diverted is 783.275Ha. The remaining area 129.52 Ha is non forest land. Hence degraded forest area of (784 x 2) 1568 Ha is required for processing the diversion of 783.275 Ha forest land situated kin the Naini Coal Mine.

MoEF & CC (FC Division) vide letter No.P/No 11.423/2011-FC dt/ 31.01.2011 accorded status of Central Public-Sector Unit (CPSU) to SCCL for the purpose of creation of compensatory afforestation (double the degraded forest land) in respect of proposals seeking prior approval of Central Government under Sec.2 of Forest Conservation Act. 1980.

SCCL is required to get about 1568 Ha of degraded forest area and accordingly vide letter dated 30.11.2016 requested DFO, Angul for identifying the degraded forest lands for CA Purpose in Angul Division. DFO, Angul vide letter No.10366 dtd. 07.12.2016 informed that no degraded forest lands for CA Purpose is available in his division and advised to approach the neighbouring division.

Accordingly SCCL approached Addl. PCCF Nodal Officer for arranging identification of degraded forest lands for CA purpose. Addl. PCCF/Nodal Officer vide letters No.19349 dts. 04.09.2017 requested DFO, Bolangir divisions for identifying degraded forest lands for CA Purpose.

SCCL officials also visited the Office of DFO Bolangir and requested for early action in the matter as they have to submit application for diversion of Forest land involved in the Naini Coal Mine on priority basis as the Ministry of Coal is insisting for early action in the matter.

The survey and demarcation of boundary putting RCC pillars in the field is completed in the above mention proposed two Reserve Forest required for compensatory afforestation.

DFO, Bolangir has identified the degraded forest in one patch as detailed below.

Sl. No.	Name of the RF	Name of the Range	Name of the Section	Area Ha identified inHa.
1	Tikhari	Muribahal	Bolangir	600 565
	Total:			600 565

02. DETAILS OF THE SITE SELECTED:

Due to biotic interference, erratic rainfall, prolonged heat conditions the vegetation is in degraded condition. This results to bushy growth, pole size crop with scattered matured trees. The growing stock is struggling against the biotic interference like grazing, fire hazard, fire wood collection by nearby villagers and encroachment. However, whatever regeneration is sprouting does not grow vigorously due to biotic interference by fringe villagers encircling those R.Fs.

(a) Crop Composition:

The main species noticed on the above R. Fs are Sal (Shorearobusta), Asan (Terminalia alata), Dhaura (Anogeissuslatifolia), Moi (Lanneacoromandelica), Salai (Boswelliaserrata), Kendu (IDiospyros melanoxylon), Simal (Bombax ceiba), Karada (Cleistanthuscollinus), Kangada (Xyliaxylocarpa), Tangan (Albizia lebbek), Char (Buchnanialanzan) and Salia bamboo (Dendocalamusstrictus) with shrubs and herbs of profound importance to maintain the Bio diversity.

(b) Temperature:

The average annual temperature varies from 15° C to 49° C the minimum being in December - January and the maximum in May-June.

(c) Rain Fall:

The annual average rainfall varies from 780 to 1880 mm. The maximum rainfall is received during the rainy season from July to August.

(d) Climate:

The climate of this area is characterized by a hot dry summer and well distributed rainfall by the South-West monsoon season. The hot season starts from March and continues till June, which is the hottest month of the year with mean daily maximum temperature of 49°C and the mean daily minimum temperature of 35°C. The rainy season starts from July to September, August being the month with the heaviest shower. Relative humidity is high in the South-West monsoon season. The rainfall is fairly uniform throughout the Division. Storms and depressions from the Bay of Bengal during the monsoon

season pass across the Division causing rainfall and strong wind. The winter starts from November to February.

03. SPECIAL OBJECTS OF MANAGEMENT:

- To restrict the degradation by reducing the biotic interference to barest minimum and reverse the trend towards the process of restoration of vegetation.
- ii) To develop the forest by providing site-specific silvicultural treatment.
- iii) To facilitate the boosting of natural regeneration and ensure their establishment.
- iv) To take up appropriate soil moisture conservation (SMC) measures to improve the soil and moisture regime.
- v) To improve the bio-diversity of these blocks.
- vi) To meet the need of the local villagers with regard to fire wood and small timber depending upon the productivity (from silvicultural operations like thinning, subsidiary silvicultural operation, climber cutting, cutting of high stumps, double shoot cutting etc.)

04. ITEM OF WORK TO BE TAKEN UP:

To achieve the objective narrated in the foregoing para, the following items of work are mainly prescribed to be taken up.

i) Survey and Demarcation of Boundary

The boundary line of this block will be cleared of weeds at a width of 5m and stone pillars will be constructed at every curvature. The proposed Compensatory Plantation area will be surveyed and demarcated in the field by the User Agency at the Project cost by putting RCC pillars. Before one year of planting, the treatment area will be surveyed and demarcated in the field Silvicultural cleaning will be done in this area to provide facility to dominant prominent species to grow faster than the others. The plantation area will be indicated by signboards at corners or at points of intersection with roads, inspection paths and boundary lines. The signboard should contain the name of the plantation site, area, scheme and year of planting, model of plantation,

project cost, species preferred and other details. Treatment map must be prepared before execution of work and the same should be approved by DFO with intimation to the RCCF, Bhabanipatna.

ii) Fencing:

As the area is nearer to the habitation and lies adjacent to the agricultural land and there is every chance of biotic interference to the plantation area. Therefore, it has been proposed to provide barbed wire fencing all along the boundary approaching to human habitation.

iii) Soil Moisture Conservation:

As per Office Order No.1044110F (CAMP A)-54t2017 dated 13th October 2017 of the Principal CCF, Odisha Soil and Moisture Conservation Structures has to be reflected at the sites keeping in view the gradient and aspect. In addition to that at the foot hill side concrete masonry check dams with diaphragm wall to be constructed to arrest flow of water resulting increase in water table and soil moisture regime of the locality.

iv) Protection Measure:

The identified site of Bankamundi and Goudadei are having thin forest cover with a few scattered trees of miscellaneous species and good Sal crop at sparse. Due to biotic interference and to save the area from damage and further degradation, the following protection measures have been prescribed.

(a) Watch and Ward:

The Compensatory area will have to be protected by engaging watchers for 10 years, i.e. till establishment of the planted trees and saplings. In addition at strategic locations entrance gate will be provided to check sudden trespass of cattle.

(b) Motivation of People:

As per Govt. Resolution of 1993, the nearby villagers have to be involved in protection of plantation raised under compensatory scheme. For this purpose,

meeting to be conducted and local V.S.S will be associated with the field work from very inception of the plantation.

Plantation activities will be executed with the full involvement of the Local Van Sarakhyan Samitees (VSS. Standard Entry Point Activities (EPA) will be included to ensure their participation.

v) Plantation:

The area will be stocked by way of raising plantations @ 800 plants per hectare in ANR modelwith the following species.

- 1. Tectonagrandis (Teak)
- 2. Pongamia Pinata (Karanja)
- 3. Simarubaglauca (Simaruba)
- 4. Azadiractaindica (Neem)
- 5. Pterocarpusmarsupiun (Bija)
- 6. Emblica Officinalis (Amla)
- 7. Terminalia Belerica (Bahada)
- B. Terminliachebula (Harida)
- 9. Dalbergialatifolia (Pahadisissoo)
- 10. Cassia Siama (Chakunda)
- 11. Gmelinaaborea (Gambhar)
- 12. Madhucalatifolia (Mohula)
- 13. Terminalia Tomentosa (Asan)
- 14. Dendrocalamusstrictus (Salia Bamboo)

Different operations those will be taken up for plantation are follows:

i) Raising of Nursery:

Seeding required for this plantation shall be raised at nearly Permanent nursery, at Bamanda in close vicinity of the planting site with available infrastructures available. Nursery work will start one year in advance to the year of plantation, so that one year old seedling will be available for plantation, seeds shall be collected from plus/selected trees and should be treated, before dibbling. Poly-

pot seedlings should be raised 10% extra than the actual requirement to compensate the casualties during nursery stage as well as planting time. Standard nursery practices will be followed for raising such nursery.

ii) Alignment and Pitting:

Alignment and Pitting will be taken up in the month of November- December at perceptible gaps and pits of size 30 cm x 30 cm x 30 cm with the dug maintaining a spacing of 2.5 mtr x 2.5 mtr. and dug up earth will be pilled preferably on the northern aspect.

iii) Planting:

The seedlings will be planted in the dugout pits with initial dose of manure. Plantation should be taken up after first regular shower of monsoon and should be completed by the end of July. Species should be planted as per the suitability of the soil condition. As per norm application of manure & fertiliser of desired dose must be applied. Antitermite insecticide should also be applied to each pit while planting casualties if any, noticed should be replaced with the excess seedling raised for the purpose. During second year also casualty replacement will be done for which seedling shall be raised.

iv) Weeding Soil Working & Manuring:

For establishment and better growth of the planted seedling, circular weeding, soil working and manuring are necessary. It is prescribed that two weddings; soil working and manuring will be done during the first year and second year of plantation and one weeding and soil working during third year. During the first year & second year, first weeding and manuring shall be carried out during August-September and the second one during October-November. First weeding shall be an entire area weeding (Scraping) and the second will be of strip weeding along the contour. The weeding of third year will be a strip weeding which will be carried out during August.

v) Application of Insecticides:

In the plantation site after planting good healthy seedling may cause influx of insects, which usually eat and damage the roots of the plants. To get rid of such insects attack application of the insecticides will be taken up in required doses

at desired intervals Spraying of insecticides shall be done preferably in a sunny day in the afternoon.

vi) Post Planting Operation:

After care of plantations are mandatory for having a good stand of crop of much density. Time line study with benchmark evaluation to have a remarkable achievement on crop condition. Third party evaluation of the crop must be taken up and result there off be reported.

05. INSPECTION, MONITORING & EVALUATION:

It was told by Late H.F. Mooney, Conservator of Forest that every visit of Forest Officer to plantation site will add manure to the plantation. Therefore, to make this Afforestation scheme successful, intensive inspection of the plantation by forest field staff and the officers at different level is required. Moreover, for frequent monitoring & evaluation proper infrastructure facility shall have to be made in the scheme.

06. CONTROL:

The nursery journal, the plantation journal micro planning with other records shall be maintained for each patch separately in accordance with the provision of "The Odisha Forest Plantation Manual 1977 indication the Physical and Financial achievements. Necessary entries with regard to plantation activities undertaken shall be entered in the journals and shall be produced before the inspecting officers. The date of inspection and comments of the visitor will also find place in the journal.

07. EXECUTIVE AGENCY:

The Divisional Forest Officer, Bolangir Forest Division through his staff will execute the scheme as per fund to be provided by the user agency.

08. FUNDING AGENCY:

THE SINGARENI COLLIERIES COMPANY LTD.

09. TOTAL FINANCIAL OUTLAY FOR THE SCHEME:

The total financial outlay of the scheme is Rs. 11,14,70,090 (Rupees Eleven Crore Fourteen Lakh Seventy Thousand and Ninty only).

Divisional Forest Officer Bolangir Forest Division COST NORM FOR AIDED NATURAL REGEMERATION (ANR) @ 800 PLANTS PER HECLARE

SL No.	Itom of M. I	Wage rate Rs. 30		the same of the sa		
SL NO.	Item of Work	Preferable Period of Execution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (Rs.)
		Oth	Year			
1	Survey, Demarcation and Pillar	Nov/Dec	2	606.80	ol	60
	Posting, GPS Reading with mapping					50
2	Site Preparation	Nov/Dec	2	606.80		
3	Silvicultural Operation including	Jan/Feb	5	1517.00	0	607
	clearance of weed, climber cutting, high stump cutting, singling of shoots etc.			1317.00	o o	1517
	Nursery cost (6 months old seedling)part @ Ps. 13-30 seedling (Rs.9-26 in Oth year + Rs. 104 in 1st year) for s.20 sce things (800+80)	lan-Mar	22	6674.20	1474.00	8148.80
1	Luma a ricy and amoreseen		1	200		
	Expenditures	-		0.00	220	250
	Sub rutat		31	9405,401	1704,00	10130.10
	Momtoring & Supervision charge 5% of the total cost					335, 17
	Grand Total		31	9405.40	1704.00	11554.37
y 18	die die de la company de la co	1st v	ear			1
	Pedhng) balance & R. 1 O. fr	Apr-Mil	11	3322.42	4.7.0.	4712.204
	Services					
		ab/Mar [24	7281.50	1.00	7.3. 4
	asualty replacement	m/Ang	20	1083.50	0.04	
4 6	amiphote weeding, Soil wursing, V	ur/Sen	74			
	lantining		7-1	1281 00		and the
5 14	o dia vetto compost (or in	ng/Sen i	nt			
15	nafpiani (a ns. 201- per kg s		1	Later -	are tell	16 W. C.
R	3200.00 and Granular					
ļin.	secticide 5 gms/prant @ 65.50/					
	er kg. =Rs.320.00					
		eb/Mar	0	0.001	1225.00	
	Urea 70 gms/plant in two					
Mu	bscauent doses-@ Rs.6/ per					
	No. 230.00		i			
(6)	NPK 50 gms/plant @ Rs.24/					
	r kg=Rs.960.00 as basal dose					
Pie	eline Tracing and Inspection					
Par			3	910,201	() (()	510.70
Sity	icultural Operation involving			10 10 1		
	erance of weeds, cutting of		1.9	4551.00	0.00	4551.00
	nbern, singling of shoots etc.					
	Conservation Measures		70			
	ggered trenches of			0063.00	0.00	obliously.
	ension 2 m x 0.5 m x 0.5 m					
	@ nosicer ha) or in.					
1240	ivaient					

Mre	Item of Work	Preferable Period of Execution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (Rs.)
10	Watch & ward		7	2123.80	0.00	2123.
11	Contingency and Unforeseen Expenditures		0	0.00	338.00	338.
	Sub Total		124	37621.60	5371.80	42993.
	Monitoring & Supervision		12.7	3,021.00	3372.00	2149.
	charge 5% of the total cost					
	Grand Total	2nd	124	37621.60	5371.80	45143.0
1	Casualty Replacement including	Znd	Year 4	1213.60	1013.60	2227.
-	cost of seedling, carriage and planting			1213.00	1013.50	2227
2	Complete weeding and cultural		8	2427.20	0	2427.
	operations					
3	Soil working and manuring		8	2427.20	0	2427
4	Cost of -ertiliserand insecticide		0	0.00	3232.66	3232.
	(a) Vermicompost 200gms/plant					
	Test its active per significant to the second					
	(b) Granular Insecticides 5					
	Igms/plant for 80 plants 400 gras					
	@ Rs.80/- per kg=Rs.32.00					
	Fireline Tracing and Inspection			303.40	0	303
	Path					
6	Soil Conservation Measures		8	2427.20	01	2477
	(Penovation of staggered					
	(frenches etc.)					
7	Warch & ward (whole year)		7	2123.80	0	2123.
	(Contingency and Unforeseen			0.00	223	21141
	Expenditores					15303.0
	Sub Total		36	10922,46	1,169,50	
	Monitoring & Supervision charge 5% or the total cost					757.5
			25	10000 10	4469 50	
	Grand Total	370 7	36 Year	10922.40	4469.50	15151.
1	Complete weeding and cultural		4	1213.60	0	1213.8
	operations					
2	Soil working		4	1213.60	0	1213
3	Fireline Tracing and Inspection		1	303,40	0	303.
	rath					
1	Watch & ward (whole year)		7	2123.80	. 0	2123.8
	Sub Total		16	4854,401	0	4854.4
	Monitoring & Supervision charge 5% of the total cost					242.7
	charge 5% of the total cost					
	Grand Total		15)	4854,40	0	5097.1
		4th Y	ear			
	Fireline Tracing and Inspection		1	303,40	0	303.4
	Path					
2	Watch & ward and cultural operations		7	636.80	0	

N. P.	Item of Work	Preferable Period of Exerution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (R)
		W. Jackson,				
	Monitoring & Supervision					45.5
	charge 5% of the total cost					
	Grand Total		3	910.20	0	955.7
	A.,	5th	Year			
1	Fireline Tracing and Inspection Path		1	303.40	0	303.4
2	Watch & ward and cultural opertions		2	606,80	0	606.8
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	٥	955
		5th)				
İ	Fireline Tracing and Inspection		1	303.40	0	303.4
2	Path Watch & ward and cultural		2	606.30	0	606.8
	opertions	L		21.1.10		910.2
	Sub Total Monitoring & Supervision		3	910.20	0	45.5
	charge 5% of the total cost					
	Grand Total	/*h \	3	910.20	0	255.
1	Fireling Tracing and Inspection	/2013	1	303,40	n)	303
2	Water & ward and cultural operations		4	rub sur	1)	195,35 g
	Sub Total		3	910.20	0	910.7
	Monitoring & Supervision charge 5% of the total cost					45.
	orang Total	· i		2,0,00	U	950
	F	oth Y	lear .	303.40	ol ol	30.1
1	Fireline Tracing and Inspection [Path]		1	503.40	*	233
2	Watch & ward and cultural opertions		2	506.30	0	5,005
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	0	955.7
		9th Y	-			
	Fireline Tracing and Inspection Path		1	303 401	-1	36) 4 4
2	Watch & ward and cultural opertions		2	505.80		506 9
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	0	955.7

-						
SL AD	Item of Work	Preferable Period	Labour in	Lobour (Rs)	Material (35.)	Total (Rs.)
		of Execution	Mandays			
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10th	Year			
1	Fireline Tracing and Inspection Path		1	303.40	0	303.4
2	Watch & ward and cultural opertions		2	606.80	0	606.8
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	0	955.7
		ABST	RACT		<u> </u>	
St. No.	Item of Work	Person days	Lobour (Rs)	Material (Rs.)	Monitoring & Supervision charge 5% of the total sost	Total (Rs.)
1	Oth Year	31	9405.40	1704.00	555.47	11664.3
2	1st Year	124	37621.60	5371.80	2149.67	35143.0
3	2nd Year	35.	10922,40	4469,60	The second secon	16161.5
4	3rd Year	16	4854,40	9		5007.1
5	4th Year	31	910.20	0	The second secon	900.7
6	5th Year	4	910.20	(3	45.51	955.7
7	6th Year	3	910.20	0	45.51	955.7
8	7th Year		910.27	0	45.51	955.7
9	Sth Year		910.20	C	+5.34	933.7
10	9th Year		910.20	3	15,51	357.7
11	toth Year		910.20			223.1
	TOTAL	228	69175.20	11545 40	4036 03	34755.53

AddLPCCF(PP&A) Dy.CF(ARL)

Principal CCF, Odisha

Cost of ANR plantation @ 800 plantif Ha over 565.0 Hq. @ 84,756.63 Ha fer Ha. = R84, 756. 63 x 565.0 Ha.

= Re 4, 78, 87, 496.00.

4	COST NORMS	FOR VEGET	ATIVE FEN	ICING		
Si. No.	Item of Work	Preferable Period of Execution	Mandays	Labour Cost @Rs.303.40 Per Man day	Material Cost per hectare in (Rs.)	Total Cost per hectare in (Rs.)
1	2	3	4	5	6	7
1	For an average of 126 meters/ha Rs.79.72 per meter for bambootwigs and bamboo thorn fencing (L:M=40.60)	Jun/Sept	19	5764.60	4279.94	10044.54
	To be strengthening by planting bamboo and other sedlings in two rows. Bamboo to be planted at 2 meters spacing in staggered manner on the two rows and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2 m apart. Thus 500 plant (125 bamboo and 375 to the species to be planted in two rows to cover 125m of periphery/ ha by the vegetative tence (paintoo seedlings @ Rs.13.30 per Iseedling X 125 = Rs.1662.50, Agave seedlings @ Rs.5.21 per seedling X 375 = Rs.1965.00)	Jun/Sept	11	3337.40	3627.5	6964.90
	Total		30	9102.00	7907.44	17009.44

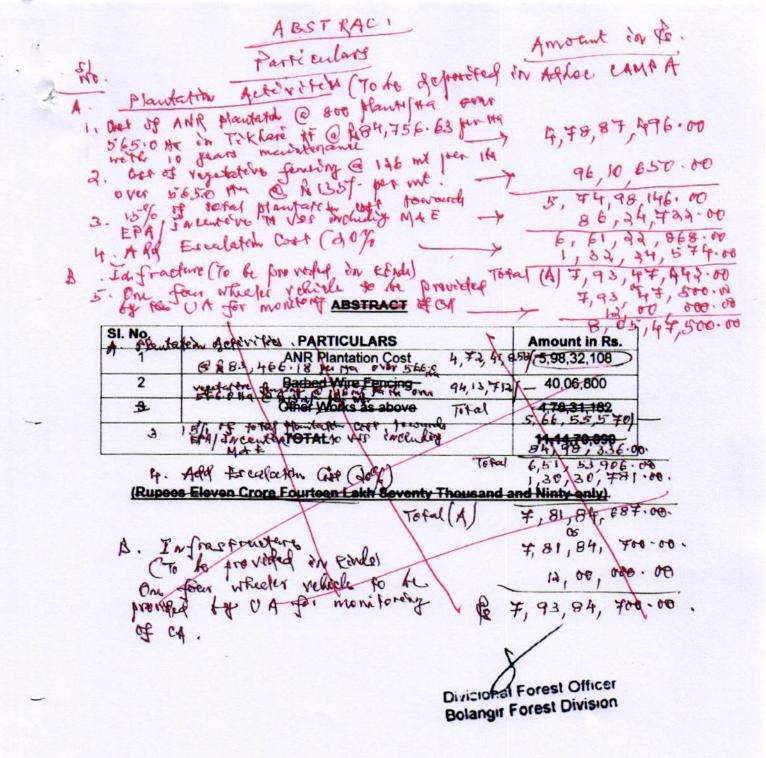
Vereintive rending Cost der meter

Rs 17,009.44/126 m = Rs 13 t 99 Oc Rs 135/

Cost of vegetative ferring @ 126 mb/Hq over 565.0149

@ Rs 135/- per Ha.

= Rs 96, 10, 650.00



Divisional Forest Officer, Angul Division

General Manager
The Singareni Collieries Co. Ltd.
(A. Govt. Company)
Naini Area, Angul, Odisha-759122

20

Revised Financial Outlay for Compensatory Afforestation Scheme over 565.0 ha of degraded forest land identified in Tikhari RF under Balangir Forest Division against diversion of 783.275 ha forest land for Naini Coal Mine in Angul District by M/s Singareni Collieries Company Ltd. (SCCL)

(Wage Rate @ Rs.303.40 per MD)

Sl. No.	Description	Amount (Rs.)
A.	PLANTATION ACTIVITIES:	
	(To be deposited in Adhoc-CAMPA)	
1.	Cost of ANR Plantation @ 800 Plants per ha over 565.0 ha in Tikhari RF @ Rs.84,756.63 per ha with 10 years maintenance	4,78,87,496.00
2.	Cost of Vegetative fencing @ 126 mt per ha over 565.0 ha @ Rs.135/- per mt	96,10,650.00
	Total	5,74,98,146.00
3.	15% of the total plantation cost towards Entry Point Activity/ Incentive to VSS including monitoring & evaluation	86,24,722.00
	Total	6,61,22,868.00
4.	Add Escalation Cost (20%)	1,32,24,574.00
	Total (A)	7,93,47,442.00 Or rounded off to 7,93,47,500.00
B.	INFFRASTRUCTURE (To be provided in kinds):	
5.	One four wheeler vehicle to be provided by the User Agency for monitoring of Compensatory Afforestation	12,00,000.00
	Total (B)	12,00,000.00
	Grand Total (A+B)	8,05,47,500.00

(Rupees Eight Crore five lakhs forty seven thousand five hundred) only

Technically Approved

Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, FC Act
2.0 (6 (2.0)

Revised Financial Outlay for Compensatory Afforestation Scheme over 565.0 ha of degraded forest land identified in Tikhari RF under Balangir Forest Division against diversion of 783.275 ha forest land for Naini Coal Mine in Angul District by M/s Singareni Collieries Company Ltd. (SCCL)

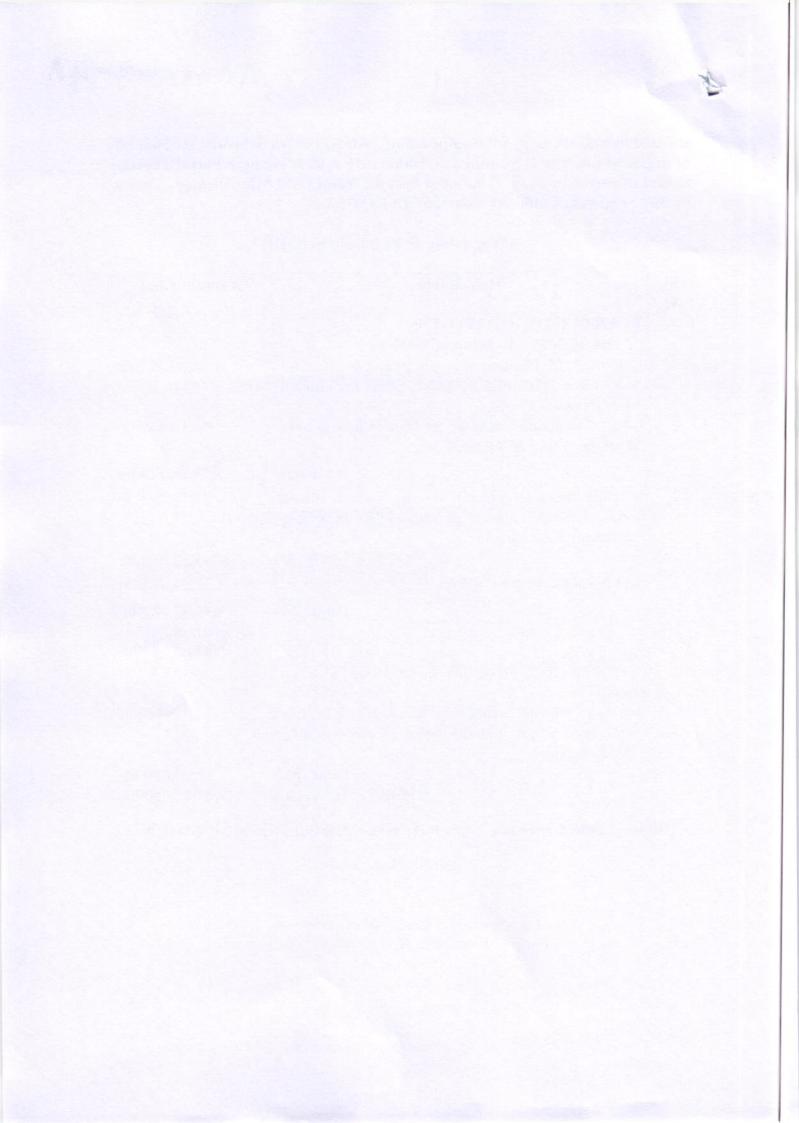
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(Rupees Eight Crore five lakhs forty seven thousand five hundred) only

Technically Approved

Principal Chief Conservator of Forests Forest Diversion & Nodal Officer, FC Act





OFFICE OF THE DIVISIONAL FOREST OFFICER BOUDH FOREST DIVISION, BOUDH

Phone/ Fax No. 06841-222073

e-mail - boudhdfo@gmail.com

Memo No. 2939 4F-80/2018 Dt. 08 107 / 2020

To

The Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, F.C Act O/o the Principal Chief Conservator of Forests, Odisha, Bhubaneswar

Sub:-

Proposal for diversion of 783.275 Ha. of forest land consisting of 643.095 Ha. of RF in Chhendipada & Kankurupal Reserved Forest and 140.180 Ha. of village Forest Land in Chhendipada Range of Angul Division for Naini Coal Block (Open Cast) under Angul District Odisha of M/s Singareni Collieries Company Ltd.

Ref:-

Your Memo no. 11654 dt. 17.06.2020 and this office memo no. 6303 dt. 25.10.2017

With reference to the above cited memos on the captioned subject, it is to intimate you that the point wise compliance report as raised by the Govt. of India, MoEF & CC, New Delhi vide their letter F. No.8-01/2020-FC dt. 17.04.2020 relating to the above project is furnished below.

i a- The total forest land involved in Naini Coal Block is 783.275 Ha. for which 1566.55 Ha. of degraded forest land is required for Compensatory Afforestation, out of which 1083 Ha. (Bankamundi RF 542Ha. & Goudadei RF 541Ha.) of degraded forest was identified and a scheme prepared and submitted earlier vide this office memo no. 6302 dt. 25.10.2017 to the DFO, Angul Division. But the Ministry of MoEF & CC, New Delhi has observed that the identified area is more than the requirement area and directed that the CA area should be the exact required area i.e. 1566.55Ha. or 1567 Ha. Further, the Ministry of MoEF & CC, New Delhi has intimated that, 541Ha. CA land indentified in Goudadei RF earlier, wherein 22 Ha. is MDF which is not suitable and admissible for Compensatory Afforestation purpose in accordance with guidelines by the Ministry of MoEF & CC, New Delhi and 9.8 Ha. shown planted area has been excluded from total area.

Moreover, out of the required CA land i.e. 1567Ha., 565 Ha. of degraded forest land have been identified in Tikhari RF of Bolangir Forest Division, out of proposed 600 Ha excluding a tune of 35 Ha of MDF area, which was approved

by the PCCF, FD & Nodal Officer, FC Act O/o the Principal C.C.F, Odi_ia, Bhubaneswar and the balance area i.e. 1002Ha. (Bankamundi RF 542Ha. & Goudadei RF 460Ha.) in respect of this Division, the revised KML/Shape file and CA map is enclosed herewith for authentication and onward transmission to the Govt. of India, MoEF & CC, New Delhi.

b- Further, in case of Goudadei R.F proposed area of 541Ha. Compensatory Afforestation land indentified earlier comes to 9.8Ha. of plantation area and 22Ha. MDF area has been excluded as per DSS. Again taking into consideration about presence of existing regeneration and tree species with some canopy cover has been excluded from the area and a tune of 460Ha. area of Goudadei R.F has been included in the Compensatory Afforestation area, which can accommodated 800 Plants per Ha..

Accordingly, Compensatory Afforestation land Bankamundi R.F. 542Ha. & Goudadei R.F. 460Ha. total 1002Ha identified for which a revised Compensatory Afforestation scheme @ 800 Plants per Ha. in ANR with Gap plantation made of degraded forest land is prepared with a financial outlay of Rs. 16,56,04,676/- (Rupees Sixteen Crore Fifty six Lakhs Twenty Four Thousand Six Hundred Seventy Six) only and submit herewith for necessary approval at your end.

c- As per the Site Inspection of Range Officer, Boudh, no plantation has been carried out in the past over the revised identified area.

This is for favour of kind information and necessary action.

Encl: As above

Divisional Forest Officer Boudh Division

Memo No. 2940

Dt. 08/07/2020

Copy forwarded to the Regional Chief Conservator of Forests, Berhampur Circle for favour of kind information and necessary action.

Divisional Forest Officer
Boudh Division

Annexure-9

SCHEME FOR

COMPENSATORY AFFORESTATION OVER 1002 Ha.

IN DEGRADED FOREST LAND AT

BANKAMUNDI R.F (542 Ha.) &

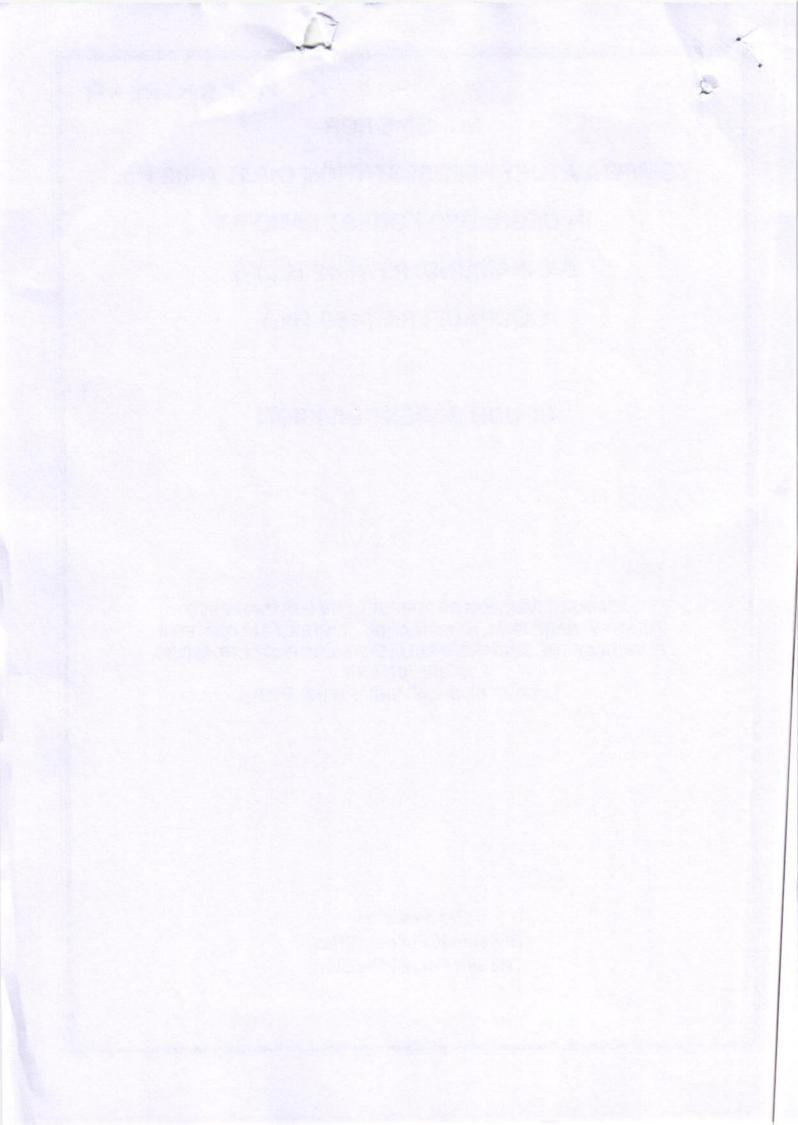
GOUDADEI R.F (460 Ha.)

in

BOUDH FOREST DIVISION

AGAINST DIVERSION OF FOREST LAND FOR PROPOSED
765.85 Ha. NAINI COAL MINE IN ANGUL DISTRICT ALLOCATED IN
FAVOUR OF THE SINGARENI COLLIERIES COMPANY LTD. (SCCL),
ANGUL, ODISHA
(A GOVT. OF INDIA MINING COMPANY)

Prepared by Divisional Forest Officer Boudh Forest Division



Land Suitability Certificate

This is to certify that 1002 Ha. of degraded forest land in Bankamundi R.F.(542 Ha.) and Goudadei R.F. (460 Ha.) of Boudh Range in Boudh Forest Division identified for Compensatory Afforestation is suitable for plantation from management point of view. No plantation has been carried out in the particular area previously.

Divisional Forest Officer Boudh Forest Division SCHEME FOR COMPENSATORY AFFORESTATION 1002 HA. IN DEGRADED FOREST LAND AT BANKAMUNDI R.F. (542 Ha.), GOUD DEI RF (460 Ha.) IN BOUDH FOREST DIVISION AGAINST DIVERSION OF FOREST LAND FOR PROPOSED 765.85 Ha. NAINI COAL MINE IN ANGUL DISTRICT ALOCATED IN FAVOUR OF THE SINGARENI COLLIERIES COMPANY LTD. (SCCL), ANGUL, ODISHA

01. <u>INTRODUCTION:</u>

The **Singareni Collieries Company Ltd.** (SCCL) is the oldest Govt. Mining Company working in the State of Telangana and having a history of 127 years' experience in Coal mining. SCCL is a Govt. Company with equity participation of Telangana State and Government of India in the ratio of 51:49 respectively. SCCL is presently operating 16 Open Cast and 31 Under Ground Mines with a Manpower of 58,390.

SCCL diversified into power generation and established 2X600 MW power plant (STPP) in the Manchiriyal District of Telangana. The STPP was dedicated to the Nation by our Honorable Prime Minister on 07.08.2016. Another Unit of 600 MW power plant is under construction.

Ministry of Coal, GOI allotted Naini Coal Mine for meeting the Coal requirement of STPP. Nominated Authority, Ministry of Coal, GoI vide order No.103/21/2015/NA dtd 13.08.2015, allotted Naini Coal Mine in the state of Odisha to SCCL for end use in STPP. Naini coal mine spans over an area of 9.12 sq. km between Latitude 20°48′07″& 21°07′07″ North & Longitude 84°52′56″ & 84°53′06″ East. Naini Coal Mine is covered under Survey of India Toposheet No.73 C/16 on R.F. 1:50000. Special topo sheet Nos. L-11 and M-11 on the RF 1:10000 and falls within Angul district of Odisha. Total geological reserves estimated are 455.18 Million tons (Mt) up to a depth of 550 m. Rated capacity of coal production is 10.0 MTPA.

Naini Coal Mine comprises an area of 912.789 Ha., out of which, RF area is 643.09 Ha., & village forest area is 122.76 Ha which is also required to be diverted under Forest (Conservation) Act. The total forest area to be diverted is 765.85 Ha. The remaining area 146.93 Ha., is non-forest land. Hence, degraded forest area of (765.85X2)1531.70 Ha., is required for processing the diversion of 765.85Ha., forest land situated in the Naini Coal Mine.



MoEF & CC (FC Division) vide letter No.F.No.11-423/2011-FC, dtd.31.01.2011 accorded status of Central Public-Sector Unit (CPSU) to SCCL for the purpose of creation of compensatory afforestation (double the degraded forest lands) in respect of proposals seeking prior approval of Central Government under Sec.2 of Forest (Conservation) Act,1980.

SCCL is required to get about 1531.70Ha. of degraded forest area and accordingly vide letter dated 30.11.2016 requested DFO, Angul for identifying the degraded forest lands for CA purpose in Angul Division. DFO, Angul vide letter No.10366 dtd. 07.12.2016 informed that no degraded forest lands for CA Purpose is available in his division and advised to approach the neighboring Divisions.

Accordingly, SCCL approached Addl. PCCF, Nodal Officer for arranging identification of degraded forest lands for CA Purpose. Addl. PCCF/Nodal Officer vide letters no. 19349 dtd. 04.09.2017 requested DFO, Boudh divisions for identifying degraded forest lands for CA Purpose.

SCCL officials also visited the Office of DFO, Boudh and requested for early action in the matter as they have to submit Application for diversion of Forest land involved in the Naini Coal Mine on priority basis as the Ministry of Coal is insisting for early action in the matter.

The survey and demarcation of boundary putting RCC pillars in the field is completed in the above mention proposed two Reserve Forest required for compensatory afforestation.

DFO, Boudh has identified the degraded forest in two patches of different RF as detailed below.

SI. No.	Name of the RF	Name of the	Name of the	Name of the Beat	Total RF	Working Circle	Area identified
	the ru	Range	Section	the beat	area in Ha.		in Ha.
1	Bankamundi	Boudh	Boudh	Debagada & Beredabari	4649	Rehabilitation Working Circle Compt No. 1 2, 3, 4, 5 & 6	542
2	Gouda Dei		Boudh	Pankhimal	1015	Rehabilitation Working Circle Compt. No. 1, 2 & 3	460
		To	tal				1002Ha.



OF. DETAILS OF THE SITE SELECTED:

Due to biotic interference, erratic rainfall, prolonged heat conditions the vegetation is in degraded condition. This results to bushy growth, pole size crop with scattered matured trees. The growing stock is struggling against the biotic interference like grazing, fire hazard, fire wood collection by nearby villagers and encroachment. However, whatever regeneration is sprouting do not grow vigorously due to biotic interference by fringe villagers encircling those R.Fs.

(a) Crop Composition:

The main species noticed on the above R.Fs are Sal (Shorea robusta), Asan (Terminalia alata), Dhaura (Anogeissus latifolia), Moi (Lannea coromandelica), Salai (Boswellia serrata), Kendu (Diospyros melanoxylon), Simal (Bombax ceiba), Karada (Cleistanthus collinus), Kangada(Xylia xylocarpa), Char (Buchnania lanzan) and Salia bamboo (Dendocalamus strictus) with shrubs and herbs of profound importance to maintain the Bio diversity.

(b) Temperature:

The average annual temperature varies from 15° C to 49° C the minimum being in December- January and the maximum in May-June.

(c) Rain fall:

The annual average rainfall varies from 780 mm to 1880 mm. The maximum rainfall is received during the rainy season from July to August.

(d) Climate.

The climate of this area is characterized by a hot dry summer and well distributed rainfall by the South-West monsoon season. The hot season starts from March and continues till June, which is the hottest month of the year with mean daily maximum temperature of 49°C and the mean daily minimum temperature of 35°C. The rainy season starts from July to September, August being the month with the heaviest shower. Relative humidity is high in the South-West monsoon season. The rainfall is fairly uniform throughout the Division. Storms and depressions from the Bay of Bengal during the monsoon season pass across the Division causing rainfall and strong wind. The winter starts from November to February.

C3: SPECIAL OBJECTS OF MANAGEMENT:

- To restrict the degradation by reducing the biotic interference to barest minimumand reverse the trend towards the process of restoration of vegetation.
- ii) To develop the forest by providing site-specific silvicultural treatment.
- iii) To facilitate the boosting of natural regeneration and ensure their establishment.
- iv) To take up appropriate soil moisture conservation (SMC) measures to improve the soil and moisture regime.
- v) To improve the bio-diversity of these blocks.
- vi) To meet the need of the local villagers with regard to firewood and small timber depending upon the productivity (from silvicultural operations like thinning, subsidiary silvicultural operation, climber cutting, cutting of high stumps, double shoot cutting etc.)

04. ITEM OF WORK TO BE TAKEN UP:

To achieve the objective narrated in the foregoing para, the following items of work are mainly prescribed to be taken up.

i) SURVEY AND DEMARCATION OF BOUNDARY

The boundary line of this block will be cleared of weeds at a width of 5m and Stone pillars will be constructed at every curvature. The proposed Compensatory Plantation Area will be surveyed and demarcated in the field by the User Agency at the Project cost by putting RCC pillars. Before one year of planting, the treatment area will be surveyed and demarcated in the field. Silvicultural cleaning will be done in this area to provide facility to dominant prominent species to grow faster than the others. The plantation area will be indicated by signboards at corners or at points of intersection with roads, inspection paths and boundary lines. The signboard should contain the name of the plantation site, area, schemeand year of planting, model of plantation, project cost, species preferred and other details. Treatment map must be prepared before execution of work and the same should be approved by DFO with intimation to the RCCF, Berhampur Circle.

斯) FENCING

As the area is nearer to the habitation and lies adjacent to the agricultural land and there is every chance of biotic interference to the plantation area. Therefore, it has been proposed to provide barbed wire fencing all along the boundary approaching to human habitation.

III) SOIL MOISTURE CONSERVATION

As per Office Order No.1044/10F (CAMPA)-54/2017 dated 13th October,2017 of the Principal CCF, OdishaSoil and Moisture Conservation Structures has to be reflected at the sites keeping in view the gradient and aspect. In addition to that at the foot hill side concrete massonary check dams with diaphragm wall to be constructed to arrest flow of water resulting increase in water table and soil moisture regime of the locality.

IV) PROTECTION MEASURE:

The identified site of Bankamundi R.F and Goudadei R.F are having thin forest cover with a few scattered trees of miscellaneous species and good sal crop at sparse. Due to biotic interference and to save the area from damage and further degradation, the following protection measures have been prescribed.

(a) Watch and ward.

The Compensatory area will have to be protected by engaging watchers for 10 years, i.e. till establishment of the planted trees and saplings. In addition at strategic locations entrance gate will be provided to check sudden trespass of cattle.

(b) Motivation of people:

As per Govt. resolution of 1993, the villagers of Beredabari, Nuagada, Debagada, Kanpur, Raipur, Khandahata, Erda and Karunapali etc. villages have to be involved in protection of plantation raised under Compensatory Afforestation scheme. For this purpose, meeting to be conducted and local V.S.S will be associated with the field work from very inception of the plantation.

Plantation activities will be executed with the full involvement of the local Van SarakhyanSamitees (VSS). Standard Entry Point Activities (EPA) will be included to ensure their participation.

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V) PLANTATION:

The area will be stocked by way of raising plantations @800 plants per hectare in ANR model with the following species

- 1. Syzygium cumini (jamun)
- 2. Pongamia piñata (Karanja)
- 3. Albizia lebbeck (Sirisa)
- 4. Azadiracta indica (Neem)
- 5. Pterocarpus marsupiun (Bija)
- 6. Emblica officinalis (Amla)
- 7. Terminalia belerica (Bahada)
- 8. Terminlia chebula (Harida)
- 9. Dalbergia latifolia(Pahadi Sissoo)
- 10. Shorea robusta (Sal)
- 11. Gmelina arborea (Gambhar)
- 12. Madhuca latifolia (Mohula)
- 13. Terminalia tomentosa(Asan)
- 14. Acacia catechu (Khair)
- 15. Mangifera indica (Mango)
- 16. Artocarpus heterophyllous (Panasa)
- 17. Dendrocalamus strictus(Salia Bamboo)

Different operations those will be taken up for plantation are as follows :-.

i) Raising of nursery:

Seedling required for this plantation shall be raised at nearby Permanent nursery, at Bamanda in close vicinity of the planting site with available infrastructures available. Nursery work will start one year in advance to the year of plantation, so that one-year old seedlings will be available for plantation; Seeds shall be collected from plus/ selected trees and should be treated before dibbling. Poly-pot seedlings should be raised 10% extra than the actual requirement to compensate the casualties during nursery stage as well as planting time. Standard nursery practices will be followed for raising such nursery.

B



ii) Alignment and Pitting:

Alignment and stacking with pitting will be taken up in the month of November-December at perceptible gaps and pits of size 30 cm \times 30 cm \times 30 cm will be dug maintaining a spacing of 2.5 mtr. \times 2.5 mtr. and dug up earth will be piled preferably on the northern aspect.

iii) Planting:

The seedlings will be planted in the dugout pits with initial dose of manure. Plantation should be taken up after first regular shower of monsoon and should be completed by the end of July. Species should be planted as per the suitability of the soil condition. As per norm application of manure & fertilizer of desired dose most be applied. Anti-termite insecticide should also be applied to each pit while planting. Casualties if any noticed should be replaced with the excess seedling raised for the purpose. During second year also casualty replacement will be done for which seedling shall be raised.

iv) Weeding, Soil Working & Manuring:

For establishment and better growth of the planted seedling, circular weeding, soil working and manuring are necessary. It is prescribed that two weddings; soil working and manuring will be done during the first year and second year of plantation and one weeding and soil working during third year. During the first year and second year first weeding and manuring shall be carried out during August-September and the second one during October-November. First weeding shall be an entire area weeding (scraping) and the second will be of strip weeding along the contour. The weeding of third year will be a strip weeding which will be carried out during August.

V) Application of insecticides:

In the plantation site after planting good healthy seedling may cause influx of insects, which usually eat and damage the roots of the plants. To get rid of such insects attack application of the insecticides will be taken up in required doses at desired intervals. Spraying of insecticides shall be done preferably in a sunny day in the afternoon.

VI) Post Planting Operations:

After care of plantations are mandatory for having a good stand of crop of much density. Time line study with benchmark evaluation to have a remarkable achievement

on crop condition. Third party evaluation of the crop must be taken up and result there off be reported.

VII) Special Soil Moisture Conservation Measures

Special SMC measures will be taken up through construction of LBCD structure and staggard trenches to check soil erosion and rain water draining out of the area and the cost will 25% of the total plantation cost.

VIII) Escalation Cost

Escalation cost will be 20% of the entire plantation, Barbed wire fencing and SMC measures.

IX) Infrastructure Development

There is a provision of Infrastructure Development (in kind) such as modernization, monitoring and evaluation of the project @ 15% of the plantation and SMC cost.

05. INSPECTION, MONITORING & EVALUATION:

It was told by Late H.F. Mooney, Conservator of Forests that every visit of Forest Officer to plantation site will add manure to the plantation. Therefore, to make this Afforestation scheme successful, intensive inspection of the plantation by forest field staff and the officers at different level is required. Moreover, for frequent monitoring & evaluation proper infrastructure facility shall have to be made in the scheme.

06. CONTROL:

The nursery journal, the plantation journal microplanning with other records shall be maintained for each patch separately in accordance with the provision of "The Odisha Forest Plantation Manual 1977 indicating the Physical and Financial achievements. Necessary entries with regard to plantation activities undertaken shall be entered in the journals and shall be produced before the inspecting officers. The date of inspection and comments of the visitor will also find place in the journal.

07. EXECUTIVE AGENCY:

The Divisional Forest Officer, Boudh Forest Division through his staff will execute the scheme as per fund to be provided by the user agency.

08. FUNDING AGENCY:

THE SINGARENI COLLIERIES COMPANY LTD.

a

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09. TOTAL FINANCIAL OUTLAY FOR THE SCHEME:

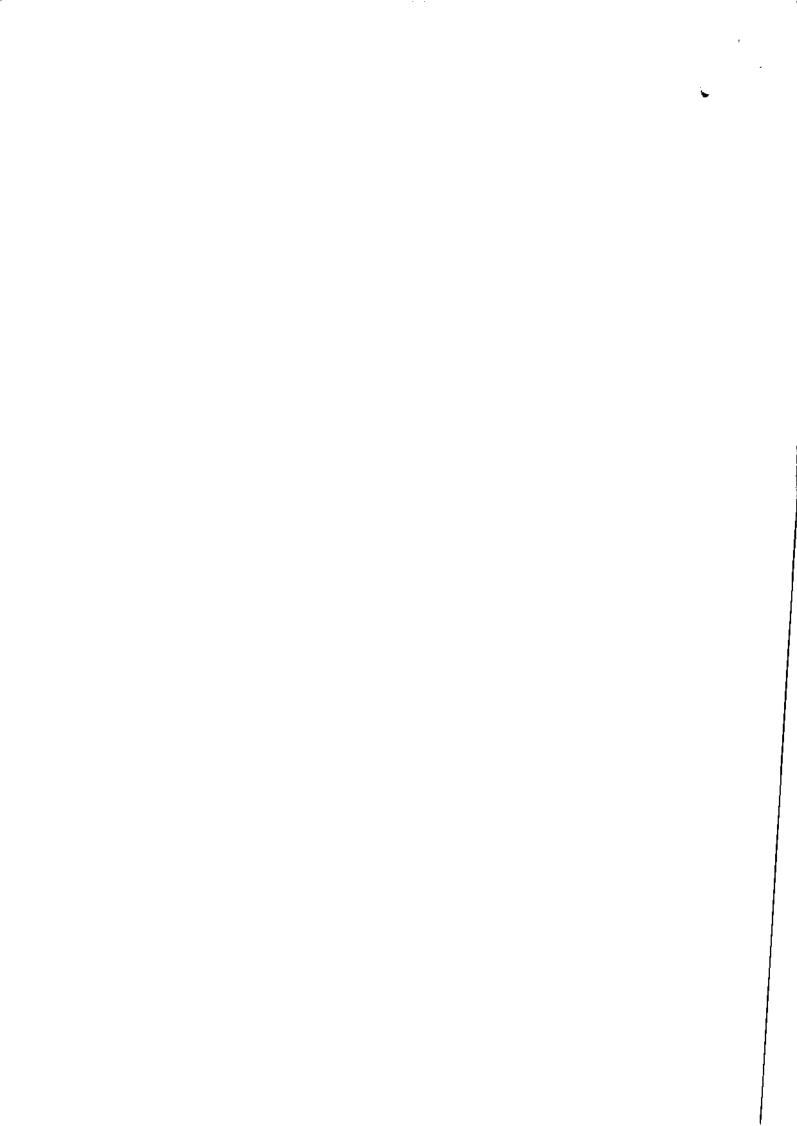
The total financial outlay of the scheme is Rs.16,56,04,676.00/-

(Rupees sixteen crore fifty six lakhs four thousand six hundred seventy six) only

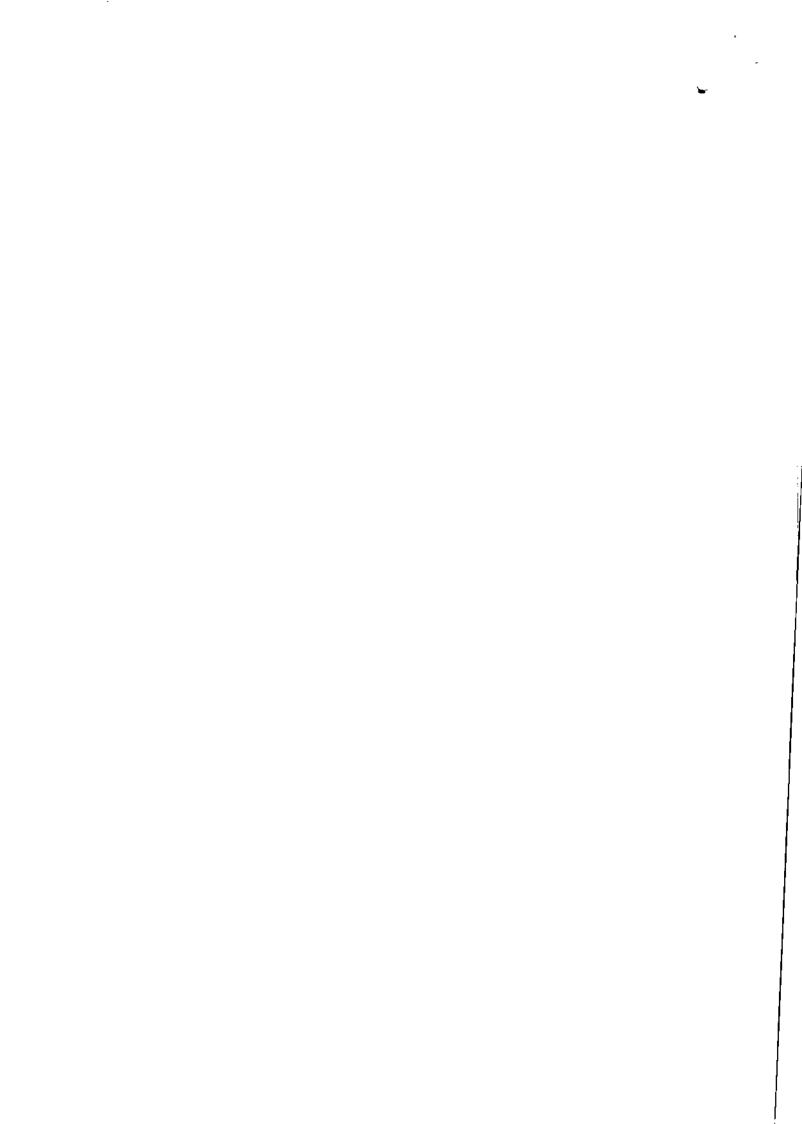
Divisional Forest Officer
Boudh Forest Division

		Wage rate Rs.30	3.40 per Man			
SL. No.	Item of Work	Preferable Period of Execution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (Rs.)
	1	Oth '	Year			
1	Survey, Demarcation and Pillar Posting, GPS Reading with mapping	Nov/Dec	2	606.80	0	60
2	Site Preparation	Nov/Dec	2	606.80	0	60
3	Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc.	Jan/Feb	5	1517.00	0	151
4	Nursery cost (6 months old seedling)part @ Rs.13.30 seedling (Rs.9.26 in 0th year + Rs.4.04 in 1st year) for SSO seedlings (SOO+SO)	Jan-Mar	22	6674.30	1474.00	8148.8
5	Confingency and Unforeseen Expenditures		- 0	0.00	230	23
	Sub Total		31	9405.40	1704.00	11109.4
	Monitoring & Supervision charge 5% of the total cost					555.4
	Grand Total		31	9405.40	1794.00	11564.3
	•	1st	Year			
1	Nursery cost (6 months old seeding) balance @ Rs.4.04 for 880 seedlings	Apr-Iul	11	3337 40	217.80	3555.20
2	Pitting 30 cm cube size	Feo/Mar	24	7281.60	0.00	
3	Carriage and planting including casualty replacement	Jul/Aug	20	6063.00	0.00	5063.0
4	Complete weeding, Soil working, Manuring	Aug/Sep	24	7281 60		7231.0
5	Cost of Verini compost 200 gms/plant @ Rs.20/- per kg = Rs.3200.00 and Granular Insecticide 5 gms/plant @ Rs.80/ per kg. =Rs.320.00	Aug/Szu	0	0.00	35,20,20	3520.50
6		Feb/Mar	0	0.00	1296.00	1296.0
7	Fireline Tracing and Inspection Path		3	910.20	0.00	910.20
	Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoots etc.		15	4551.00	0.00	4551.00
	Soil Conservation Measures (Staggered trenches of dimension 2 m X 0.5 m X 0.5 m @ 60 nos per ha) or its equivalent		20	6068.00	0.00	506 3 .00

SL. No.	Item of Work	Preferable Period of Execution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (Rs.)
		or execution	manicays			
10	Watch & ward		7	2123.80	0.00	2123.
11	Contingency and Unforeseen Expenditures		0	0.00	338.00	338.
	Sub Total		124	37621.60	5371.80	42993.
	Monitoring & Supervision charge 5% of the total cost					2149.
	Grand Total		124	37621.60	5371.80	45143.
1	Casualty Replacement including	2nd	Year 4	1213.60	1013.60	2227
	cost of seedling, carriage and			1213.60	1013.60	2227.
2	Complete weeding and cultural		8	2427.20	0	2427.
	operations					
3	Soil working and manuring		8	2427.20	0	2427.
4	Cost of Fertiliserand insecticide		0	0.00	3232.00	3232.
	(a) Vermicompost 200gms/plant					
	@ Rs.20/- per kg=Rs.3200.00					
	(b) Granular Insecticides 5					
	gms/plant for 80 plants 400 gms					
	@ Rs.80/- per kg=Rs.32.00					
5	Fireline Tracing and Inspection		1	303.40	0	303
	Path					203.
6	Soil Conservation Measures		8	2427.20	0	2427
	(Renovation of staggered					
	trenches etc.)					
7	Watch & ward (whole year)		7	2123.80	0	2123.8
8	Contingency and Unforeseen		0	0.00	224	224.0
	Expenditures Sub Total			10000		
	Monitoring & Supervision		36	10922.40	4469.50	15392.0
	charge 5% of the total cost					769.6
	Grand Total		36	10922.40	4469.50	15151.6
1	Complete weeding and cultural	3rd Y	-			
1	operations		4	1213.60	0	1213.6
2	Soil working		4	1212.00		
-	Fireline Tracing and Inspection			1213,60 303,40	0	1213.6
	Path		1	303.40	0	303.4
4	Watch & ward (whole year)		7	2123.80	0	2123.8
	Sub Total		16	4854.40	0	4854.4
	Monitoring & Supervision charge 5% of the total cost					242.7
	Grand Total		16	4854.40	0	5097.17
-		4th Ye	ar			
	Fireline Tracing and Inspection Path		1	★ 303.40	0	303.40
	Watch & ward and cultural opertions		2	606.80	()	605.80
1	Sub Total		3	910.20	0	910.20



SL. No.	Item of Work	Preferable Period	Labour in	Lobour (Rs)	Material (Rs.)	Total (Rs.)
		of Execution	Mandays			
	Monitoring & Supervision					45.5
	charge 5% of the total cost					
	Grand Total		3	910.20	0	955.7
		5th	Year			
1	Fireline Tracing and Inspection Path		1	303.40	0	303.4
2	Watch & ward and cultural opertions		2	606.80	0	606.8
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	0	955.
	I 1 - 1 - 1	6th	fear	303.40	ol	303
1	Fireline Tracing and Inspection Path					
2	Watch & ward and cultural opertions		2	606.30	0	606.8
	Sub Total Monitoring & Supervision charge 5% of the total cost		3	910.20	0	910.; 45,
	Grand Total		3	910.20	0	955.
		7th)	/ear			
1	Fireline Tracing and Inspection Path		1	303.40	0	303
2	Watch & ward and cultural opertions		2	606.80	0	506,
	Sub Total		3	910.20	0	910.
	Monitoring & Supervision charge 5% of the total cost					45.
	Grand Total	216	3	910.20	0	955.7
1	Fireline Tracing and Inspection	3th Y	ear	303,40	0	303.2
	Path					
2	Watch & ward and cultural opertions		2	605.30	0	606.8
	Sub Total		3	910.20	0	910.2
	Monitoring & Supervision charge 5% of the total cost					45.5
	Grand Total		3	910.20	0	955.7
,		9th Y		202.42		
	Fireline Tracing and Inspection Path		1	303.40	0	303.4
2	Watch & ward and cultural opertions		2	08.606	0	606,8
	Sub Total Monitoring & Supervision charge 5% of the total cost		3	910.20	0	910.2 45.5
	Grand Total		3	910.20	0	955.7



SL. No.	Item of Work	Preferable Period of Execution	Labour in Mandays	Lobour (Rs)	Material (Rs.)	Total (Rs.)
- +		10th	Year			
1	Fireline Tracing and Inspection Path		1	303.40	0	303.40
2	Watch & ward and cultural opertions		2	606.80	0	606.80
	Sub Total		3	910.20	0	910.20
	Monitoring & Supervision charge 5% of the total cost					45.51
	Grand Total		3	910.20	0	955.71
		ABST	RACT		<u></u>	
SL. No.	Item of Work	Person days	Lobour (Rs)	Material (Rs.)	Monitoring & Supervision charge 5% of the total cost	Total (Rs.)
1	Oth Year	31	9405.40	1704.00	555.47	11564.37
2	1st Year	124	37621.60	5371.80	2149.67	45143.07
3	2nd Year	36	10922.40	4469.50	769.60	16161 60
4	3rd Year	16	4854.40	0	242.72	5097.12
5	4th Year	3	910,20	. 0	45,51	955.71
6	5th Year	3	910.20	0	45.51	955.71
7	6th Year	3	910.20	0	45.51	955.71
8	7th Year	3	910.20	0	45.51	955.71
9	8th Year	3	910.20	0	45.51	955.71
10	9th Year	3	910.20	0	45.51	955.71
11	10th Year	3	910.20	0	45.51	955.71
		Promotion and the second secon				

AddLPCCF(PP&A)

Dy.CF(Aifn.)

AddLPCCF(MESIV) CCF (CAMPA) AddLPCCF (Nodal)

RCC

Principal CCF, Odisha



AIDED NATURAL REGENERATION @800 PLANTS/Ha. OVER 1002(542+460) Ha. IN BANKAMUNDAI RF & GOUDADEI RF OF BOUDH FOREST DIVISION (ANR)

ESTIMATE OF COST FOR 1.00HA. UNDER ANR WITH GAP PLANTATION MODEL Wage Rate-Rs.298/Day

SI. No.	Item of Work	Persondays	Labour (Rs.)	Material (Rs.)	Total (Rs.)
	0 th Year (Adva	nce work) Pro	e-planting O	peration	
1	Survey, Demarcation & Pillar Posting, GPS Reading with mapping	2	596	0	596
2	Site Preparation	2	596	0	596
3	Silvicultural Operation Including clearance of weed, climber cutting, high stump cutting, singling of shoots	5	1490	0	1490
4	Raising Nursery @660 seedlings/ha including 10% Casualty replacement) and watch & ward (part-1) @12.43	22	6556	1469.6	8025.6
5	Contingency and Unforeseen Expenditures	0	0	230	230
	SubTotal	31	9238	1699.6	10937.6
6	Monitoring & Supervision @5%				546.88
	O th Year Grand Total	31	9238	1699.6	11484.48
	15	Year Mainter	nance		
1	Maintenance of Nursery (Balance)	11	3278	230	3508
2	Pitting 30cm cube size	24	7152	0	7152
3	Carriage and planting including Casualty replacement	20	5960	0	5960
4	Complete weeding, Soil working, manuring	24	7152	0	7152
5	Cost of Vermi compost and Insecticide for plantation	0	^ 0	3520	3520
6	Cost of Chemical Fertilizer	0	0	1296	1296



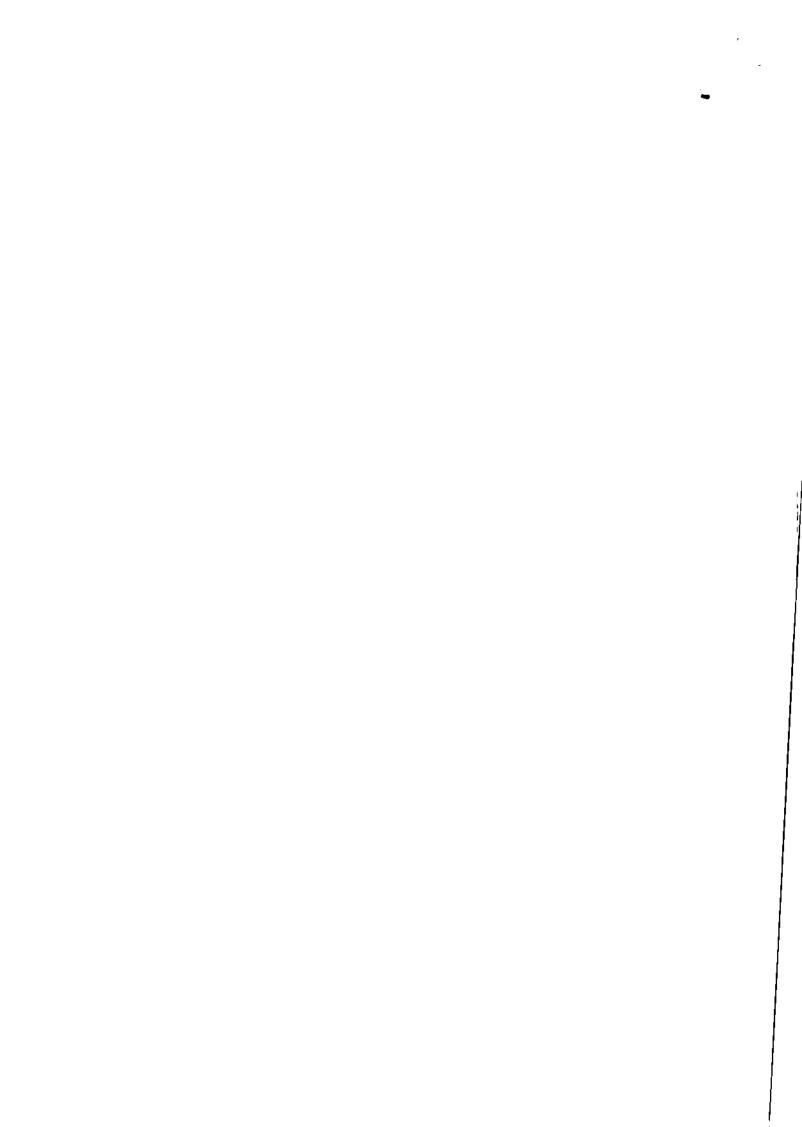
	3 rd Year Grand Total	16	4768	0	5006.4
5	Monitoring & Supervision @5%				238.4
	Sub Total	16	. 4768	0	4768
4	Watch & Ward (Whole Year)	7	2086	0	2086
3	Fire line Tracing and Inspection path	1	298	0	298
2	Soil working	4	1192	0	1192
1	Compete weeding and Cultural operations	4	1192	0	1192
		36 r Maintenand	10728	4450.40	15937.3
9	Monitoring & Supervision @5% 2 nd Year Grand Total	26	10770	4450.40	758.92
9	Sub Total	36	10728	4450.40	15178.4
8	Contingency and unforeseen Expenditure	0	0	224	224
7	Watch & Ward (Whole Year)	7	2086	0	2086
6	Soil conservation measures	8	2384	0	2384
5	Fire line Tracing and Inspection path	1	298	0	298
4	Cost of fertilizers and Insecticide	0	0	3232	3232
3	Soil working and manuring	8	2384	0	2384
2	Complete weeding and Pruning	8	2384	0	2384
1	Casualty Replacement including cost of seedling, carriage and planting.	4	1192	994.40	2186.40
	2 nd Yea	ar Maintenan	ce		
	1 st Year Grand Total	124	36952	5384	44452.8
12	Monitoring & Supervision @5%	124	30932	5384	42336 2116.8
11	Expenditures Sub Total	124	36952	338	338
10	Watch & Ward Contingency and Unforeseen	7	2086	0	2086
9	Soil Conservation Measures	20	5960	0	5960
8	Silvicultural Operation Involving clearance of weeds, cutting of climbers, singling of shoot etc.		4470	0	4470
7	Fire line tracing and Inspection path	3	894	0	894





	4 th Year	Maintenance	е		
1	Fireline Tracing andInspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%				44.7
	4 th Year Grand Total	3	894	0	938.7
	5 th Yea	r Maintenand	e		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%				44.7
	5 th Year Grand Total	3	894	0	938.7
	6 th Yea	r Maintenan	ce		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%				44.7
	6 th Year Grand Total	3	894	0	938.7
	7 th Year	r Maintenand	e \		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%				44.7
	7 th Year Grand Total	3	894	0	938.7
	8 th Year	Maintenanc	e		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%		•		44.7
	8 th Year Grand Total	3	894	0	938.7

9



	9 th Year	Maintenan	ice		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%	\			44.7
	9 th Year Grand Total	3	894	0	938.7
	10 th Year	r Maintenai	nce		
1	Fireline Tracing and Inspection path	1	298	0	298
2	Watch & Ward	2	596	0	596
	Sub Total	3	894	0	894
3	Monitoring & Supervision @5%				44.7
	10 th Year Grand Total	3	894	0	938.7
	Grand Total	228	67944	11534	83451.90

ABSTRACT WAGE RATE @ Rs. 298-/ PER DAY

Total	Monitoring	Material & Contingencies	Labour	Person Days	SI. No.
11484.48	546.88	1699.6	9238	31	0
44452.80	2116.80	5384	36952	124	1
15937.32	758.92	4450.40	10728	36	2
5006.40	238.40	0	4768	16	3
938.70	44.70	0	894	3	4
938.70	44.70	0	894	3	5
938.70	44.70	0	894	3	6
938.70	44.70	0	894	3	7
938.70	44.70	0	894	3	8
938.70	44.70	0	894	3	9
938.70	44.70	0 -	894	3	10
83451.90	3973.90	11534	67944	228	Total



TOTAL COST/YEAR WISE COST FOR ANR WITH GAP PLANTATION OVER 1002Ha.

SI No.	Labour	Material & Contingencies	Monitoring	Total
0	9256476	1702999.2	547973.76	11507448.96
1	37025904	5394768	2121033.60	44541705.60
2	10749456	4459300.8	760437.84	15969194.64
3	4777536	0	238876.8	5016412.80
4	895788	0	44789.4	940577.40
5	895788	0	44789.4	940577.40
6	895788	0	44789.4	940577.40
7	895788	0	44789.4	940577.40
8	895788	0	44789.4	940577.40
9	895788	0	44789.4	940577.40
10	895788	0	44789.4	940577.40
Total	68079888	11557068	3981847.80	83618803.80



ber 19 over 1000 o Ha (Dankaminde AF 5'42.0 Ha + Granda dec et 460.0 Ha)

Out @ 1284, 756.63 Her Ha we the

8,49,26,143,00

*	Verejative	
1	Barbed wire Fencing around the plantation area for 42.13 km.	2,86,72,624.75
	size (Length 5Mtr., Height 1Mtr., Top width	2, 25, 76,400,00
3	1Mtr., Bottom width 7Mtr., Approne 1Mtr.) 25% of the of 1100nos @ 17500 per LBCD Plantation cost	2,09,08,278.00
\$ 60.	(b) Staggered trench @25911nos. in 1002 Ha. @64) per trench	15,72, 280.00
, 3	Infrastructure (In Kind) For office modernization (2 nos. Scorpio vehicle, One Camper, One high end Laptop, Computer, DG Set, Colour Xerox-cum-Scanner and Printer, Camera, Night Vision Camera, GPS, Inverter, Set up of GIS Lab & Other Office expenses)	1,56,81,208.55
	Total	6,52,62,111.30

TOTAL FINANCIAL OUTLAY OF THE COMPENSATIORY AFFORESTATION SCHEME

Plantation Cost:

Rs.83451.90x1002Ha. = Rs. 8,36,18,803.80

Cost of escalation:

@20%

Rs.1,67,23,760.76

Additional Cost Proposed

In fra structure (To be provided in Rinds)

Car four attector vehicle to be TOTAL:

by User Agency

= Rs.6,52,62,111.30 15,12, 42, 700 12,00,000.00

Rs.16,56,04,675.86

Fifteen twenty four

Rs. 16,56,04,676.00

(Rupees sixteen crore fifty six lakh four thousand six hundred seventy six) only

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Divisional Forest Officer
Boudh Forest Division

A. Provision of Funds and Fund Utilization

Rs. 16,56,04,676 - (Rupees sixteen crore fifty six lakh four thousand six hundred seventy six) only shall be deposited by the user Agency M/s The Singareni Collieries Company Ltd. (SCCL), Angul, Odisha, on approval of the scheme in the Adhoc CAMPA Account and the funds utilized for raising of Compensatory Afforestation by the Divisional Forest Officer, Boudh Forest Division on allotment by the Principal Chief Conservator of Forests, Odisha, Bhubaneswar.

Page 16 of 16

	COST NORMS	FOR VEGET	ATIVE FEN	ICING		
SI. No.	Item of Work	Preferable Period of Execution	Mandays	Labour Cost @Rs.303.40 Per Man day	Material Cost per hectare in (Rs.)	Total Cost per hectare in (Rs.)
1	2	3	4	5	6	7
1	For an average of 126 meters/ha Rs.79.72 per meter for bambootwigs and bamboo thorn fencing (L:M=40:60)	Jun/Sept	19	5764.60	4279.94	10044.54
	To be strengthening by planting bamboo and other sedlings in two rows. Bamboo to be planted at 2 meters spacing in staggered manner on the two rows and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2 m apart. Thus 500 plant (125 bamboo and 375 others) to be planted in two rows to cover 126m of periphery/ ha by the vegetative fence (Bamboo seedlings @ Rs.13.30 per seedling X 125 = Rs.1662.50, Agave seedlings @ Rs.5.24 per seedling X 375 = Rs.1965.00)	Jun/Sept	11	3337.40	3627.5	6964.90
	Total		30	9102.00	7907.44	17009.44

Vegetative Fencing Cost per meter = Rs. 17,009.44/126 m = Rs. 134-99 Or Rs. 135/-

ESTIMATE FOR BARBED WIRE FENCING

01) 02 ply barbed wire (5 Rtm per kg)

7 straight strand X 1000 Mt.

=7000 Mt.

2 Diagonal strand = $2 \times \sqrt{(6.5')^2 + (8.2')^2} = 2 \times 10.50 \text{ ft.}$

= 21.00 ft. x 400 rlos. = 8400 ft or

=<u>2560 Mt.</u> =9560 Mt.

Requirement of Barbed wire per Km.

Cost per KM=9560/5=1912 Kg X @ Rs.80/Kg. =

Rs.1,52,960.00

02) Construction of RCC pillars of size-Length-8ft, Bottom Width 6"x6", Top width-4"x4" Reinforced with 6mm rods with proper curing

 $\begin{cases} 8' \times \frac{6''+4''}{2} \end{cases} \times \frac{6''+4''}{2} = 1.34 \text{ cft or } 0.038 \text{ cum}$

i) Cost of c.c work 1:2:4= 0.038 cum X @5356/cum

= 203.53

ii) Cost of rod including cutting, bending & binding 0.038x0.9qtl.= 0.0342 qtl. @ Rs.10,841.72/qtl.

=370.78 Total Rs. 574.31 = 86.14

iii) Contingency (15%) including Curing, stacking, provision of hooks etc.

Rs.660.45 or 661/-

Requirement of pillars per KM-

Spacing= 2.5 mt. x 2.5 mt.

Requirement= 1000mt./2.5mt.

=400

Strut pillar in every 10th pillar=(400/10)x2

= 80

480 Nos.

Cost of pillars per Kilometer = 480 X @ 661/- =

Rs.3,17,280.00

03) Fitting fixing of RCC pillars in position with HBG metal (4cm) in C.M (1:4:8)

- Digging of pits 1.5'x1.5'x1.5'= 3.375 cft/pit for 480 pits, 480x3.375=1620 cft or 45.86 cum X @ Rs.12,814/100cum = 5876.50
- ii) Fixing of pillars with 4cm hbg metals in C.M 1:4:8 pit size- 1.5'x1.5'x1.5' = 3.375 cft. Deduct $1/3^{rd}$ of butt of pillar i.e. 3.375/3 =(-) 1.125 cft.

Total c.c. work per pillar

2.25 cft.

For 480 pillars=480x2.25=1080cft or 30.577 cum. X @ Rs.3702.74/cum.=Rs.1,13,218.68

Total =

Rs.1,19,095.00

04) Labour for straightening the barbed wire and fixing & clipping with pillars 70M.D per km@298/-

Rs.20,860.00

05) Carriage of Barbed wire & pillars to work site

@Rs.1000/tl. and cost of loading & unloading within 5 km distance Approximately 10 tld @ 800/tld

Rs.18,000.00



06) Provision of one Iron Gate of size (4'x5') on LS

Total

Rs. 7,500.00 = Rs.6,35,695.00

Labour Cess 1%

= Rs. 6,357.00

Expenditure per 1 km of barbed wire fencing =

Rs.6,42,052.00

07) Expenditure towards maintenance for 3 years (3rd , 6th & 9th year) @ 2% of cost per RKM = 3 x 2% X Rs.6,35,154.66/- =

= Rs.38,523.00

Expenditure per 1 km of fencing including maintenance = Rs.6,80,575.00

So, expenditure per running meter = Rs.6,80,575/1000Mtr. = 680.58/- Per Mtr.

Total Fencing Cost for **3.836 Km. X 6,80,575.00** = Rs.26,10,685.70/- or **Rs.26,10,686/-**(Rupees twenty five lakh ten thousand six hundred eighty six) only

Boudh Forest Division.

ANALYSIS OF RATE

1.(a) Earth work excavation of foundation in hard soil with in initial lead 50m. and lift 1.5m. including rough dressing and breaking clods Maximum 5 to 7 cm. size including leveling & dressing etc. per % Cum. Male Mulia 43.00 Nos.@ 298/-day Rs.12,814/-Female Mulia

Rs.12,814/Cum

 C.C/(1:4:8) using 4 cm. size hard granite metal including lying compacting. Curing with all cost, conveyance, royalty of materials etc. per Cum.
 (A/R 24 item no 4)

(MIN ZTICCITIO.T)			
H.G. Metal	0.96	cum.@ Rs.1223.40	Rs.1174.46
Sand	0.48	cum.@ Rs.443.00	Rs. 212.64
Cement	1.72	Qntl.@ Rs.630.00	Rs.1083.60
Massion 2 nd class	0.18	Nos.@ Rs.388/day	Rs. 69.84
Man Mulia	1.80	Nos.@ Rs.298/day	Rs. 536.40
Woman Mulia	1.40	Nos.@ Rs. 298/day	Rs. 417.20
Man Mulia	0.70	Nos.@ Rs. 298/day	Rs. 208.60
			Rs.3702.74/Cum.

 Cement Concrete (1:2:4) with 12mm size C.B.H.G. Chips including Cost. Carriage & Royalty etc. complete.

HG Chips 12mm	0.96	cum.@ Rs.1581.40	Rs.1518.14
Sand	0.45		Rs. 199.35
Cement	3.23	Qntl.@ Rs.630.00	Rs.2034.90
Massion 2 nd class	0.60	Nos.@ Rs. 388.00/day	Rs. 232.80
Man Mulia	4.60 Nos.@ Rs.298/day		Rs.1370.80
			Rs.5355.99/Cum.

 Cutting bending, binding, straightening and tying the grills and placing In position including cost of M.S. of Tor Steel & binding wires etc. Ref-A/R-2006 item No.9 pages 52 Taking output for 1QT.

Cost & carriage of HYDS steel including 5%

roi wastage & overlapping	QT	1.05	5500.00	Rs.5775.00
Binding wire (GI)	Kg	8.00	80.00	Rs. 640.00
Labour for cutting bending shifting of	of site lying			\
& placing in position. Mate	Each	0.44	388.00	Rs. 170.72
Black smith special	Each	4.00	388.00	Rs.1552.00
Semi-skilled Mulia	Each	8.00	338.00	Rs.2704.00
				_ \

Rs.10,841.72/QT.

Or Rs 5356/-

as



Analysis

Data for 100 cum

1. Earth work in all kinds of soil for excavation with initial lead & lift etc. complete.

Mulia 47.35 nos. @ Rs. 207/each

Rs. 9801.45

14,365.99

Add for 20% excavation

Rs. 1960.29/cum 2,873 30

Total:- Rs. 11761.74/100cum 17, 239.17/100 Or Say Rs. 117.61/cum 17239/cum

Date for 1 cum

2. R.R stone dry packing in aprons & revetment

30cm above etc completed.

Collection of Stone 1.00cum by engaging labour 1MD @ Rs 207/cum Mason 2nd Class 0.52nos. @ Rs. 388.30/each 393 460

Semi skilled 0.52nos. @ Rs. 338,00/each 3 43 40

Male Mulia 1.22nos. @ Rs. 207.00/each 303-40

303.40 303.40

Rs 207.00

Total

Rs. 837.21/cum

Labour Cost- Rs. 459.54

Material Cost: Rs. 377.67

1058.69

Divisional Forest Officer **Boudh Forest Division**

DETAILED ESTIMATE FOR LOOSE BOULDER CHECK DAM (LBCD) (Length 5Mtr., Height 1Mtr., Top width 1Mtr., Bottom width 7Mtr., Approne 1Mtr.)

1.	. Excavation of foundation of LBCD				
	Step-1 = 5Mtr. X (7+1) Mtr. X 003 Mtr.	=	12.00cum		
	Step-2 = 5Mtr. X 1 Mtr. X 0.5Mtr.				
	172.39				2423.08
	Or say 14.050cum @ Rs. 117.61/cum			Rs	17.05.34
	(Labour cost = Rs. 1705.34 Material Cos	t = Rs.	0.00)		177.05.5
2	Construction of LDCD to DD Co. (110)				
۷.	Construction of LBCD by RR Stone (HG) Foundation as above = 14.50				
	1.5				
	Super Structure – ½ x 1Mtr. X (7Mtr. + 1Mtr.)				
	Total =	10.500	um	17	F, 76536
	Or say 18.50cum @ rs. 837.21/cum				
	(Labour cost = Rs. 8501.49 Material cost	t = Rs.	6986.89)		13400.30
					1
3.	Sign board			Rs.	133.00
	(Labour cost = Rs. 0.00 Material cost = R	Rs. 133	.0)		
4	Labour Coss @ 104				303.20
"	Labour Cess @ 1% (Labour cost = Rs. 0.00 Material cost = R		26)	Rs.	
	(Labour Cost - Rs. 0.00 Material Cost = R	ks. 1/3	.26)	Tatal Da	30,573.64
				Or De	7500.00 20,524.00
		(Rupe	es seventeen		
			forenty +	owned f	Eve Lunday
	ABSTRA	CT		a	ive hundred) only Eve hungred nd twenty four
					1 James
	Expected Man Days Labour Cost		Material Cost	Total	al
	50 Nos. Rs. 10,350/-		Rs. 7,150/-	Rs.	17,500/-
	PLAN				
	FEAR				
		1	Mtr.		
			With.		
				\	
				1	
				'	\
	1 Mtr. 5 Mtr.	•		114	_
	5 Mill.			1 Mtr.	0
			0.5 N	Atr.	SHAD
		11	Mtr.	Divisi	onal Forest Office:
		- '		0 1.5	andle District

8 Mtr.

Financial Outlay for Compensatory Afforestation Scheme over 1002.0 ha of degraded forest land identified in Bankamundi RF over 542.0 ha and 460.0 ha in Goudadei RF under Boudh Forest Division against diversion of 783.275 ha forest land for Naini Coal Mine in Angul District by M/s Singareni Collieries Company Ltd. (SCCL)

(Wage Rate @ Rs.303.40 per MD)

SI. No.	Description	Amount (Rs.)
A.	PLANTATION ACTIVITIES:	
	(To be deposited in Adhoc-CAMPA)	
1.	Cost of ANR Plantation @ 800 Plants per ha over 1002.0 ha (Bankamundi RF 542.0 ha + Goudadei RF 460.0 ha) @ Rs.84,756.63 per ha with 10 years maintenance	8,49,26,143.00
2.	Cost of Vegetative fencing @ 126 mt per ha over 1002.0 ha @ Rs.135/- per mt	170,44,020.00
	Total	10,19,70,163.00
3.	Soil Conservation Measures	
	(i) Cost of LBCD of size (Length 5 mt., Height 1 mt., Top Width 1 mt., Bottom Width 7 mt., Appron 1 mt.) of 1100 nos. @ Rs.20,524/- per LBCD (As proposed by DFO)	2,25,76,400.00
	(ii) Cost of staggered trenches of size 2.5 mt X 0.5 mt X 0.5 mt. of 25,911 nos. over 1002.0 ha @ Rs.60.68 per staggered Trench	15,72,280.00
	Total	12,61,18,843.00
4.	Add Escalation Cost (20%)	2,52,23,769.00
	Total (A)	15,12,42,612.00 Or rounded off to 15,12,42,700.00
В.	INFFRASTRUCTURE (To be provided in kinds):	
5.	One four wheeler vehicle to be provided by the User Agency for monitoring of Compensatory Afforestation	12,00,000.00
	Total (B)	12,00,000.00
	Grand Total (A+B)	15,24,42,700.00

(Rupees Fifteen Crore twenty four lakks forty two thousand seven hundred) only

Technically Approved

Principal Chief Conservator of Forests Forest Diversion & Nodal Officer, FC Act

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS (WILDLIFE) & CHIEF WILDLIFE WARDEN, ODISHA

Department of Forest and Environment, Government of Odisha

No. 5850	_/1W	L-Co	al-79/	2018
Dated, Bhubaneswa	ar the	16	July,	2020

To

The Special Secretary to Government of Odisha. Forest & Environment Department.

Bhubaneswar

Sub:-

Proposal for diversion of 783.275 ha of forest land consisting of 643.095 ha of RF in Chhendipada & Kankurpal Reserved Forest and 140.180 ha of village Forest land in Chhendipada Range, Angul Division for Naini Coal Block (Open Cast) under Angul District, Odisha for Singareni Collieries Co. Ltd. (SCCL)

Ref:-

F&E Department memo No.10F (Cons) 123/2019-8005/F&E dt 26.05.2020

SIT.

Kind reference is invited to F&E Department memo cited above and intimate that the elephant-rich Angul forest division has witnessed many man-animal conflicts due to fragmentation of dense forests owing to mining, industrialization and rapid urbanization. No mitigative measures are fool proof enough to quarantee zero casualty to wild animals and collateral damage to human life and property.

The DFO, Angul division in the Site Inspection Report has reported about the movement of elephants in northern and southern part of lease area apprehending man-

animal conflict in adjoining villages.

To scale down the impact locally, the DFO, Angul Division has recommended for implementation of a mitigative plan addressing the issues of minimizing the man-animal conflict and providing safe passage for elephants. The Regional CCF, Angul Circle in his memo No.2229 dt 13.07.2020 (copy enclosed) has also endorsed the views of the DFO.

Besides this, as a large area of Chhendipada range falls under coal bearing zone which would invite number of miner in future it would be better if Wildlife Institute of India/Indian Institute of Science or some National Level Institute is asked to prepare a Comprehensive Elephant Management Plan to mitigate adverse impacts of coal mining on elephant population, their movements etc. for entire coal bearing belt encompassing areas of Chhendipada, Kaniha, Jarpada ranges of Angul division and Reamal range of Deogarh division alongwith adjoining continuous forest areas. The cost of such plan can be apportioned among the coal mines as and when allotted in the area.

Yours faithfully

Encl: As above

Principal CCF (WL) & CWLW, Odisha

Copy forwarded to the Assistant Inspector General of Forests, Government of India, MoEF&CC, New Delhi for favour of information and necessary action with reference to his letter in File No.8-01/2020-FC dt 17.04.2020.

Jdt /A/A.

Memo No. (76) /dt / 77) / Copy forwarded to the Principal Chief Conservator of Forests, Odisha for information and necessary action with reference to F&E Department memo No.8004/F&E-dl 26.05.2020.

Principal CCF (WL) & CWLW, Odisha

Annexure That

Office of the Regional Chief Conservator of Forests, Angul Memo No. 2229 15F.FC-79/2020 Dated- 13-7-70

To

The Addl. Principal Chief Conservator of Forests. (Wildlife) O/o the Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Odisha, Bhubaneswar Odisha, Bhubaneswar

Sub:- Proposal for diversion of 783.275 ha of forest land consisting of 643 095 ha of RF in Chhendipada & Kankurpal Reseved Forest and 14.0180 ha of village forest land in Chhendipada Range, Angul Division for Naini Coal Block (Open cast) under Angul District Odisha for . Singerani Collieries Co Ltd (SCCL) .

Ref - (i). Memo No 8005/F&E dated 26 05 2020 of Special Secretary to Govt of 29 1 Odisha, F&E Department.

(ii) Your Memo No 5445/1WL-Coal-79/2018 dated 02.07 2020 296 L

Inviting a reference to the memos cited above on the subject this is to intimate that the Divisional Forest Officer, Angul Division vide his Memo No 4153 dated 06 07 2020 has submitted compliance on point No ii of the observation made by Govt of India, MoEF & Climate Change vide letter dated 17.04,2020. I do agree with the compliance of the DFO and hence a copy of the same is sent herewith for favour of information and necessary action

Encl: As above.

Regional Chief Conservator of Forests, de Angul

Memo No 2230 dated 13 - 7- 70 Copy forwarded to the Divisional Forest Officer, Angul Division for information and necessary action with reference to his Memo No. 4153 dated 06 07 2020. Encl:-As above.

Regional Chief Conservator of Forests,

Memo No. 223/1 dated- 13-7-20 Angul

Copy forwarded to the General Manager, Singerani Collieges Company Ltd

Naini Area ,Angul for information.

Regional Chief Conservator of Forests,

THE DIVISIONAL FOREST OFFICER : ANGUL DIVISIONAL

The Regional Chief Conservator of Forests Angul Circle, Angul

Proposal for diversion of 783 275 ha forest land for Naim open case concerns & Mine) of M/S the Sugareni Collectes Company ltd consisting of 643.095 ha (Chhendipada-Ankurpal)Reserve Forest and 140.180 ha revenue forest land of Chhendipada Range Angul District

1.Mmemo No. 5446 dt. 02 07 2020 of PCCF(WL) & CWW, Odiha

2 F&E Department Mema No 3006/F&F dt 26.05.2020. 3. Menio No. 800 odt 20.05. 2020 of special Secretary to Govt. F&E Depti

With reference, to the above cited correspondence on the subject, it is to inform that the information/comments desire by the Govt of India, MOEF & CC letter in File No. 8-01/20/0-FC dt. 17.04.2020 im respect of the proposal for diversion of 783.275 ha forest land for Nami open Cost project(Coal Mine) of M/S the Singarem Collieries Company ltd consisting of 643,095 ha (Chendipada Ankurpal)Reserve Forest and 140.180 ha revenue forest land of Chhendipada Range Angul District is furnished below

Observation

It is also observed that the whole area northern and southern part of lease area as reported. In this regard, the comments of CWLW of State may be turnished.

Comments

Lin Compliance to this observation it is mentioned here that during Site Inspection of up to Deogarh Division has coal) the Forest Area to be diverted, the observation of wildlife movement i.e. (The movement of come up in future and movement of elephant is noticed in neithern & southern part wild Elephants is often witnessed in the | 61 | lease area, if the area is mined out the surrounding villages will be impacted more So ! detail Mitigation plan has to be prepared for avoiding. Man animal conflict in lature, and for providing sale passage of elephants) has been reflected on Site Inspection report in the proposal which was submitted to RCC1. August

> 2.Further the user agency shall contribute towards cost of Regional Wildlife management Plan at revised rate

3 The user agency may be asked to submit Site [Specific Wildlife Conservation Plan duly competent authority for approved by implementation at the project cost for avoiding Man animal conflict in tuture

This is for favour of your kind information and necessary action.

Divisional Editori Officer

51 No.

Memo No. 494 / Dated. 67-20 Copy forwarded to the Principal Chief Conservator of Forests. Forest Diversion.8 Nodal officer, F.C. Act, 0/o the Principal Chief Conservator of Forests, Odisha for favour of internation and necessary action

Divisional Forest Office.

Memo No. 4155 Date 67.20

Copy forwarded to the Principal Cinef Conservator of Forests, (Wildlife) & Chief Wildlife Warden, Odisha Bhubaneswar for information and necessary actionith reference to his mense no 5446 di 02 07 2020

Divisional Forest Officer

Memo No. 4156 / Dated 64-20

Copy forwarded to the Special Secretary to Government F&E Department, Odisha Bludbaneswai for favour of kind information and necessary action with reference to their Letter No 8006dt 26 05:2020

Diversional Borest Officer