



**OFFICE OF THE
REGIONAL CHIEF CONSERVATOR OF FORESTS, ROURKELA CIRCLE
AT/P.O. PANPOSH, ROURKELA-769 004**

Memo No. 2398/3F- 1157/2024 Date: 06.06.2024

To

The Principal Chief Conservator of Forests
(Forest Diversion & Nodal Office, FC Act),
O/o the Principal Chief Conservator of Forests & HoFF,
Odisha, Bhubaneswar.

Sub:- Diversion of 15.701 ha of Revenue Forest Land in the villages of Dulanga, Ghumudasan and Manoharpur under Hemgir Tahasil of Sundargarh District for Coal Mining in Manoharpur Coal Mine Project by M/s Odisha Coal and Power Ltd. (OCPL) – Submission of Compliance Report.

Ref: 1) Your Memo No.9144 Dtd.01.04.2024.
2) Memo No.2986 Dtd.30.05.2024 of the DFO, Sundargarh Division.

With reference to the aforecited Memo on the captioned subject, the DFO, Sundargarh Division vide his Memo No. 2985 Dtd.30.05.2024 addressed to this office and copy thereof endorsed to you in the next Memo of even date has submitted the point wise compliance with the observation made vide your Memo No.9144 Dtd.01.04.2024 in respect of the aforementioned proposal which may kindly be perused.

The point-wise compliance submitted by the DFO, Sundargarh Division is as follows:-

(i) **KML files corresponding to SMC treatment areas and area covered under the Wildlife Management Plan needs to be uploaded on the e-Green Watch portal.**

The DFO, Sundargarh Division has reported that the KML file showing the CA land of Manoharpur Coal Block corresponding to SMC treatment areas have been duly uploaded by the User Agency on the e-Green Watch Portal. The screen shots of upload copy & KML file in form of softcopy (email) submitted by the DFO, Sundargarh is enclosed as **Annexure-I**.

Further, as reported by him, the KML file showing the area covered under Wildlife Management-plan area has also been uploaded by the User Agency on the e-Green Watch Portal. The screen shots of upload copy & KML file in form of softcopy (email) submitted by the DFO, Sundargarh is enclosed as **Annexure-II**.

(ii) **No certificate, in compliance to condition No. A (8) of the 'in-principle' approval, has been submitted by the State. The same may be submitted by the State.**

The DFO, Sundargarh Division has stated that no plantation activities has been taken over the CA land (i.e. 15.701 ha) identified in village Ankalbira under Hemgir Tahasil of Sundargarh District as reported by the Range Officer, Hemgir vide his Memo No.118 Dtd.23.03.2024. The copy of Memo No.118 Dtd.23.03.2024 of the Range Officer, Hemgir Range in this regard is enclosed as **Annexure-III**.

Received copy
of this letter
along with
compliance in
3 (three)
sets.
10/06/24
P. B.
O/o PCCF
Odisha

(iii) **Undertaking in compliance to condition No. B 7 (iv) of the 'In-principle' approval, copy of undertaking obtained from the user agency has not been submitted along with the compliance report.**

As reported by the DFO, Sundargarh Division, the User Agency has submitted an undertaking in compliance with condition No. B 7 (iv) of the 'In-principle' approval which is attached as **Annexure-IV Series**.

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

Encl: As above



Regional Chief Conservator of Forests
Rourkela Circle

56-2024

Memo No.

Date:

Copy forwarded to the Divisional Forest Officer, Sundargarh Forest Division for information and necessary action with reference to this Memo No. 2985 dated.30.05.2024.

Regional Chief Conservator of Forests
Rourkela Circle



**OFFICE OF THE DIVISIONAL FOREST OFFICER,
SUNDARGARH FOREST DIVISION**



Phone No-06622-272243, E-Mail- dfo.sundargarh@odisha.gov.in

No. 2985/4F (Misc)-2024, Dt. 30/05/2024

To

The Regional Chief Conservator of Forests,
Rourkela Circle, Rourkela.

Sub: Proposal for diversion of 15.701 Ha of Revenue Forest Land in Village Dulinga, Ghumudasan and Manoharpur, Tahasil Hemgir, Dist. Sundargarh for development of Manoharpur Coal Mine Block by Odisha Coal and Power Limited
-Submission of Compliance Report.

Ref: 1) Memo No.9144 dt.01.04.2024 of CCF (Nodal), O/o the PCCF & HoFF (O).
2) This Office Memo No.2695 dt.10.05.2024.

In inviting a reference to the Memo cited above, the compliance report submitted by the User Agency to the observation raised by CCF (Nodal) O/o PCCF & HoFF (O) vide letter under reference. The details of point wise compliance are furnished below:-

Sl No.	Observation	Reply
(i)	KML files corresponding to SMC treatment areas and area covered under Wildlife Management plan needs to be uploaded on the e-Green watch portal.	The KML file showing the CA land of Manoharpur Coal Block corresponding to SMC treatment areas duly uploaded into e-green watch portal and screen shot of upload copy & in KML file in form of softcopy (by email) is attached vide Annexure-I . Further, the KML file showing the area covered under Wildlife Management plan area screen shot & KML file in form of softcopy (by email) is attached separately vide Annexure-II .
(ii)	No Certificate, in compliance to condition no. A(8) of the 'in-principle' approval has been submitted by the State. The same may be submitted by the State.	The Range Officer Hemgir has communicated to this office vide his Memo No. 118 dt. 22.03.2024 that the filed verification of the proposed CA land in Village Ankalbira over 15.701Ha has been carried out and it is found that there is no any plantation activity has been taken for Compensatory Afforestation (CA) in the last 10 years. The copy of same is attached as Annexure III .
(iii)	Undertaking in compliance to the condition no. B 7 (iv) of the 'in-principle' approval, copy of undertaking obtained from the user agency has not been submitted along with the compliance report.	The copy of undertaking along with safety zone compliance report and approved scheme of Safety Zone by RCCF is attached as Annexure IV .

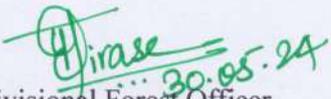
Encl: - As above.

However, the above compliance report along with Annexure-I, II, III & IV are enclosed herewith for kind perusal and onward transmission to PCCF(FD & NO) FC-Act, O/o the PCCF & HoFF, Odisha, Bhubaneswar.

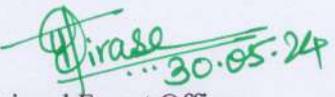

30.05.24
Divisional Forest Officer,
Sundargarh Forest Division

Memo No. 2986/4F (Misc)-2024, Dt. 30/05/2024

Copy forwarded to the Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC-Act, O/o the Principal Chief Conservator of Forests & HoFF, Odisha for favour of information and necessary action with reference to his Memo No. 9145 dt. 01.05.2024.


30.05.24
Divisional Forest Officer,
Sundargarh Forest Division

Memo No. 2987/4F (Misc)-2024, Dt. 30/05/2024
Copy forwarded to the Head of Mines, OCPL for information and necessary action.


30.05.24
Divisional Forest Officer,
Sundargarh Forest Division

Odisha Coal and Power Limited

(A Government of Odisha Company)

CIN : U10100OR20155GC018623

Website : www.ocpl.org.in

Letter No: OCPL/265
Date: 22-05-2024

To

Divisional Forest Officer,
Sundargarh Forest Division,
Odisha.

Sub: Proposal for diversion of 15.701 Ha of Revenue Forest Land in Village Dulinga, Ghumudasan and Manoharpur, Tahasil Hemgir, Dist. Sundargarh for development of Manoharpur Coal Mine Block by Odisha Coal and Power Limited - **Submission of Compliance Report for Stage II approval reg.**

Ref: 1. DFO Memo no. 2693/4F(Misc)-2024 dt. 10.05.2024

Sir,

With reference to the subject cited above and letter under ref 1, the compliance status of the observation raised by CCF (Nodal) O/o PCCF & HoFF (O) vide letter dt. 01.05.2024 is provided below for your kind consideration and further needful action please:

SI No.	Observation	Reply
(i)	KML files corresponding to SMC treatment areas and area covered under Wildlife Management plan needs to be uploaded on the e-Green watch portal.	The KML file showing the CA land of Manoharpur Coal Block corresponding to SMC treatment areas is attached in form of softcopy (by email). Further, the KML file showing the area covered under Wildlife Management plan is also attached separately in form of softcopy (by email) for your kind consideration please. In view of above, it is requested that the same may please be uploaded on the e-Green watch portal.



(ii)	No Certificate, in compliance to condition no. A(8) of the 'in-principle' approval has been submitted by the State. The same may be submitted by the State.	The copy of Memo no. 1841/4F(Misc.) dt. 21.03.2024 of the DFO, Sundargarh Forest Division addressed to the Range Officer, Hemgiri to submit the certificate regarding no plantation activities has been taken by Forest Dept. in the land proposed for CA is attached herewith as Annexure 1 . Further, the Range Officer Hemgir has communicated to your good office vide Memo no. 118 dt. 22.03.2024 that the filed verification of the proposed CA land in village Ankalbira over 15.701 ha has been carried out and it is found that there is no any planation activity has been taken for Compensatory Afforestation (CA) in the last 10 years. The copy of same is attached as Annexure 2 .
(iii)	Undertaking in compliance to the condition no. B 7 (iv) of the 'in-principle' approval, copy of undertaking obtained from the user agency has not been submitted along with the compliance report.	The copy of undertaking along with safety zone compliance report and approved scheme of Safety Zone by RCCF is attached as Annexure 3 .

The above is for your kind perusal and further consideration for Stage II approval please.

Yours faithfully,

Raddy 22/5/24

Head of Mines
Manoharpur Coal Mine Project
Odisha Coal and Power Limited
Encl: As above

Annexure - I

Screen shot showing CA land uploaded on E-green watch portal.


 Main Menu | Home | About Us | Contact Us | Help | Privacy Policy | Terms & Conditions | [Home](#)

FCA Projects, Diverted Land, CA Land Management

[Home](#) | [FCA-1980 Projects](#) | [Diverted Lands](#) | [CA Lands](#) | [Reports](#)

[Use !\[\]\(01fb5058363dcb3bfe1ee1159e9c248e_img.jpg\) to view the CA land on Earth](#)

Sl. No.	State	ECA Project	ECA project Year	Area Diverted (In Hect)	District	Tehsil	Location Details	Division	Ranhe
1	OR	DIVERSION OF 200.465 HA OF FOREST LAND INCLUDING 4.42 HA FOR SAFETY ZONE IN MANOHARPUR COAL BLOCK OF IB-VALLEY CIAFIELDS IN SUNDERGARH DISTRICT OF OR [10722]	2011	27.180	Sundargarh	Hemgir	Hemgir TAHASIL	Sundargarh	Gopalpur
2	OR	DIVERSION OF 200.465 HA OF FOREST LAND INCLUDING 4.42 HA FOR SAFETY ZONE IN MANOHARPUR COAL BLOCK OF IB-VALLEY CIAFIELDS IN SUNDERGARH DISTRICT OF OR [10722]	2011	251.160	Sundargarh	Hemgir	Hemgir Tahasil	Sundargarh	Gopalpur

P. Prasad

DIVISIONAL FOREST OFFICER
 SUNDERGARH FOREST DIVISION

Annexure - I

Screen shot showing CA land uploaded on E-green watch portal.

Home | Administration & Settings | Logout

3-Green Watch

FCA Projects, Diverted Land, CA Land Management

FCA-1980 Projects > Diverted Lands > CA Lands > Reports >

Main Menu

Access to 3-Green Watch
Division: Sundarg
24 May 2024, 13:05:05

Add Detail of Land received from UA for Compensatory Afforestation to FCA Project

Select FCA Project Year: --Select All--

Select FCA Project Type: --Select All Types--

Search FCA Projects

View Project List where CA Land details NOT registered

View Project List where CA Land Geography details NOT uploaded

View Project List where CA Land Scanned map NOT uploaded

Instruction: Click on icon for adding details of CA Lands. Click on icon for uploading GPS details of CA Lands. Click on icon for uploading Scanned Map of CA Lands. Click on icon for viewing Online. Icon with red Cross like and indicates that the data has not been uploaded.

All Project List

State	Project	Project Type	Year	Area(In Ha.)	Agency	Add CA Land	GPS	Map	View
OR	DIVERSION OF 200.465 HA OF FOREST LAND INCLUDING 4.42 HA FOR SAFETY ZONE IN HANCHARPUR COAL BLOCK OF IB-VALLEY CHALFIELDS IN SUNDARGARH DISTRICT OF OR [10722]	Mining	2011	200.465					
OR	CONSTRUCTION OF LOW POWER TV RELAY STATION [10753]	Others	1984	0.15					
OR	CONSTRUCTION OF TDMA SYSTEM BY ROURKEL STEEL PLANT [10811]	Others	1989	0.225					
OR	MINING LEASE FOR BHARATPUR TO JVS SECL IN TELCHAR (COAL MINING). [10815]	Mining	1997	269.811					
OR	MASINA NALLAH MINOR IRRIGATION PROJECT [10819]	Irrigation	1990	21.04					
OR	400KV TL FROM JAKSHEDPUR TO ROURKELA [10824]	Transmission Line	1985	7.8					

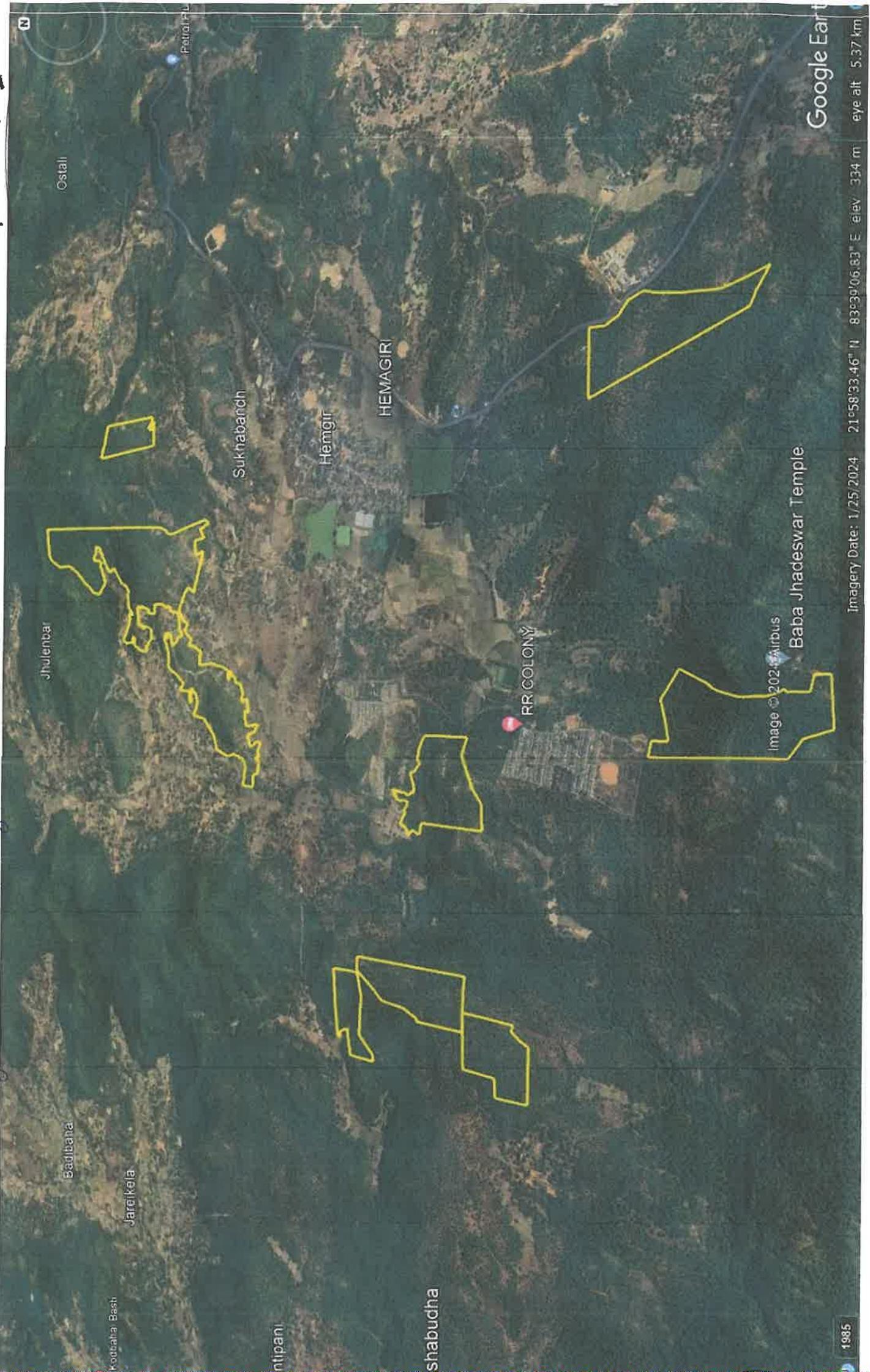
Page 1 of 1 of 48 of 48

Divase

DIVISIONAL FOREST OFFICER
SUNDARGARH FOREST DIVISION

C.A. land in Village Subhobandh, Hemgir.

Annexure - I



Google Earth

Imagery Date: 1/25/2024 21°58'33.46" N 83°39'06.83" E elev. 334 m eye alt. 5.37 km

1985

CA land in village - Durubaga, Hengxi.

Annexure - I

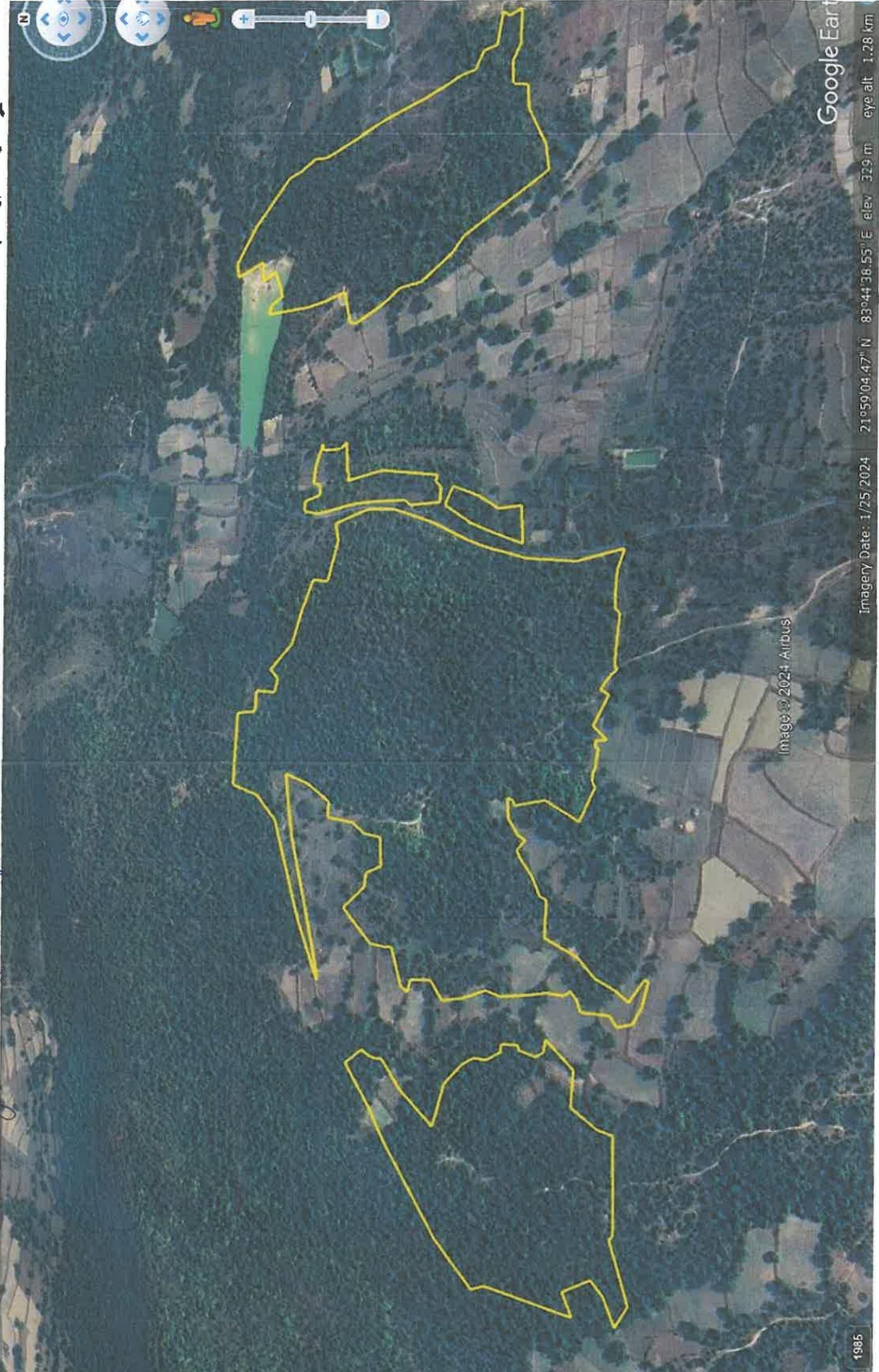


Image © 2024 Airbus

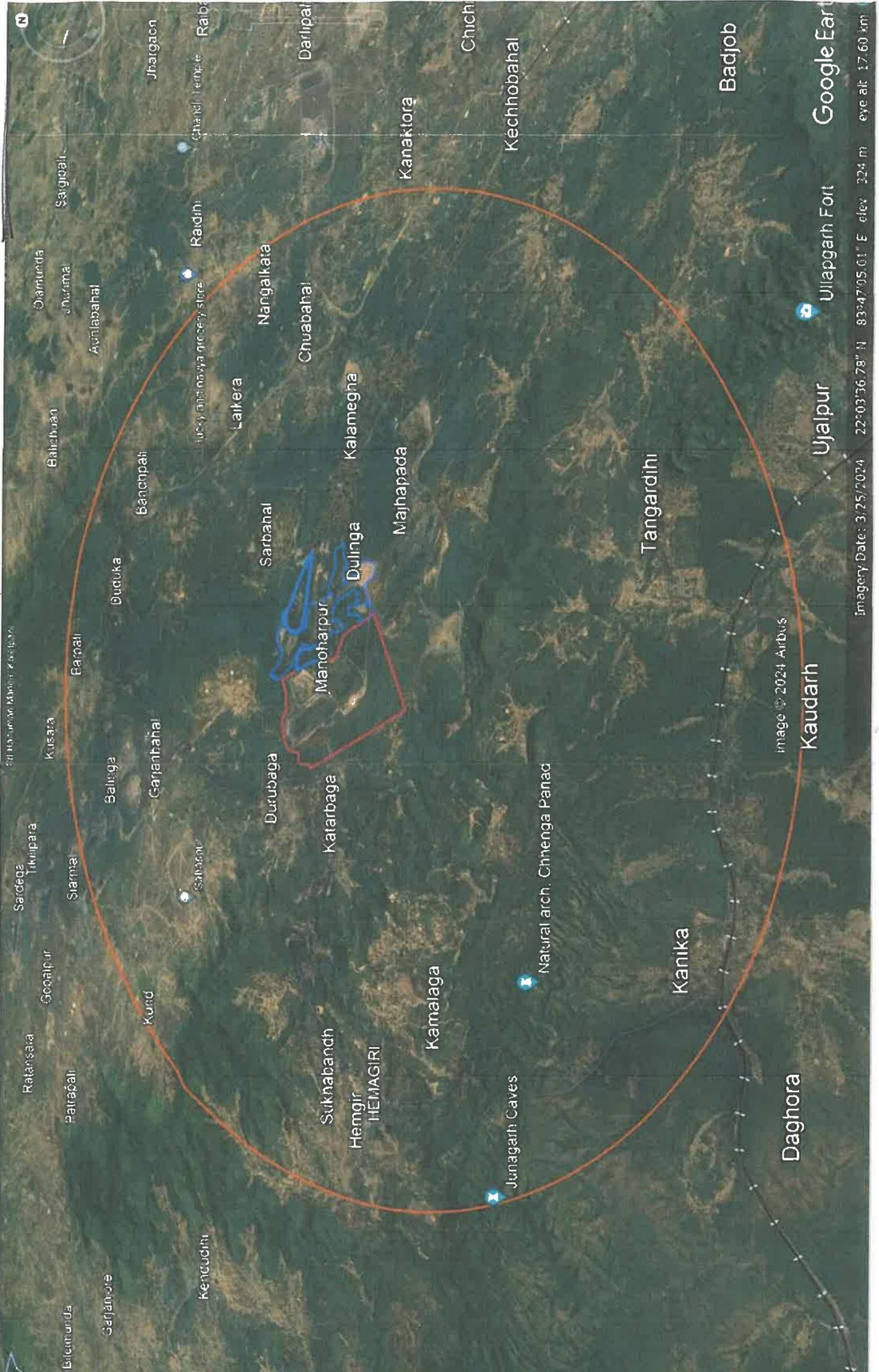
Google Earth

Imagery Date: 1/25/2024 21°59'04.47" N 83°44'38.55" E elev. 32.9 m eye alt. 1.28 km

1985

Project Area with 10km radius showing wildlife conservation implementation activities.

Annexure - II



Imagery Date: 3/25/2024 22°03'36.78" N 83°47'05.61" E elev: 324 m eye alt: 17.60 km

Google Earth

Ullaparh Fort

Ujalpur

Kaudarh

Image © 2024 Airbus

Daghora

Kanika

Tangardihi

Natural arch, Chhenga Panad

Junagarh Caves

Kamalaga

Hemgir HEMAGIRI

Suknabandh

Katarbaga

Durubaga

Manoharpur

Dulinga

Majhapada

Kalamegna

Chuabahal

Nangalkata

Lakera

Raidih

lucky and navya grocery store

Jhaigaon

Avanabahal

Saxigatal

Chusumal

Diamunda

Balichuan

Banchpali

Duduka

Barpali

Kusara

Bairiga

Ganjanbahal

Siarma

Sardega Tukupata

Gopalpur

Ratanasara

Patrapali

Kund

Sarjanore

Bilamunda

Kendudih

Kanakatora

Kechhobahal

Chich

Darlipat

Raib

Badjob

N

OFFICE OF THE RANGE OFFICER HEMGIR RANGE, KANIKAEmail.Id: rangeofficerhemgir@gmail.com**Memo No. 118 / Date:- 22.03.2024**

To

The Divisional forest Officer
Sundargarh Forest Division.

Sub:

Proposal for diversion of 15.701 ha of Revenue Forest Land in the villages of Dulunga, Ghumudasan and Manoharpur under Hemgir Tahasil of Sundargarh District for Coal Mining in Manoharpur Coal Mine Project by M/s Odisha Coal and Power Ltd.(OPCL) under DFO, Sundargarh.

Ref:

Memo No: 1841/4F(Mic.) Dated 21.03.2024 of Divisional Forest Officer Sundargarh.

Sir,

With reference to the memo and subject cited above, I am to report that on dated 22.03.2024, I conduct the field verification of the proposed CA land in village Ankelbira over 15.701ha. There is no any plantation activity has been taken for Compensatory Afforestation in last 10 years.

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

Yours faithfully,

[Signature]
22/3/24.
I/c-Range Officer
Range Officer
Hemgir Range
I/C - Hemgir Range

1469
02.04.24



Odisha Coal and Power Limited

(A Government of Odisha Company)

CIN : U10100OR2015GC018623

Website : www.ocpl.org.in

“Manoharpur Coal Mine Block at Hemgir, Dist. Sundargarh, Odisha” of Odisha Coal and Power Limited (OCPL)

UNDERTAKING REGARDING STAGE I ORDER COMPLIANCE OF FDP (i.e. 15.701 HA)

I, **Mr. Lella Ramachandra Reddy**, on behalf of Odisha Coal and Power Limited (OCPL), do hereby solemnly affirm, declare and undertake as under;

- (i) That the safety zone (i.e. 7.5m along the mine lease boundary) is being and will be maintained as per the prescribed norms.

For Odisha Coal and Power Ltd.

Lella Ramachandra Reddy

Authorized Signatory

Head of Mines
Odisha Coal and Power Ltd.

Pirase
... 08.04.24
DIVISIONAL FOREST OFFICER
SUNDARGARH FOREST DIVISION

Compliance Report w.r.t. Safety Zone

OCPL would like to submit a scheme was prepared and approved by RCCF, Rourkela for fencing, protection and afforestation of the safety zone over 5.108 ha for diversion of 276.655 ha forest land for development of Manoharpur Coal Mine Project.

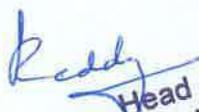
Accordingly, the area of safety zone (7.5 m strip all along the outer boundary of the mining area) has been surveyed and demarcated for fencing. Fencing of safety zone with barbed wire has been carried out all along the mine boundary and a distance of 9300 meter has been covered to protect the safety zone from any encumbrances / encroachments. An amount of Rs. 65,93,000/- has been spent towards the fencing of safety zone. The photographs showing the fencing of safety zone are attached as **Annexure (a)**. The mine boundary, safety zone pillars (6 feet and 4 feet height), barbed wire fencing etc. have been verified at site by the official of State Forest Dept. and MoEF&CC (IRO, Bhubaneswar). The photographs showing the site inspection and verification of mine boundary, safety zone etc. by the statutory official are attached as **Annexure (b)**.

Further, the area of safety zone has been planted with the indigenous species such as Neem (*Azadirachta indica*), Harida (*Terminalia chebula*), Bahada (*Terminalia belerica*) etc. Apart from safety zone, plantation have also been carried out in vacant spaces inside the project area and along the roads etc. The year wise expenditure detail of plantation carried out inside the project area, safety zone etc. is as per below:

Year	Plant Cost (In Rs.)	Transportati on Cost (In Rs.)	Manpower& supervision cost (In Rs.)	Water tanker cost (In Rs.)	Total (In Rs.)
2018-19	7350.00	3000.00	0	447127.00	457477.00
2019-20	82650.00	16125.00	465231.00	929990.00	1493996.00
2020-21	48000.00	18125.00	2586932.00	2222372.00	4875429.00
2021-22	123480.00	33250.00	1994538.00	3049087.00	5200355.00
2022-23	1984184.88	47400.00	1962948.00	6784103.00	10778635.88
Total	2245664.88	117900.00	7009649.00	13432679.00	22805892.88

Thus as per above, it is mention that an amount of Rs. 2,28,05,892.88 have been spent on the planation activity itself which covers plant cost, transportation cost, manpower and supervision cost, water tanker cost etc.

Moreover, the details of saplings planted inside the project area including safety zone are as per below:


 Head of Mines
 Manoharpur Coal and Power Ltd.

Year	Nos. of sapling planted
2018-19	7764
2019-20	6373
2020-21	8497
2021-22	19777
2022-23	17176
Total	59,587

The photographs showing the planation in safety zone area are attached as **Annexure (C)**.

Further, in future OCPL has targeted to plant 1,00,000 no. saplings of local native species inside the mine lease area, safety zone area, open spaces etc. The details of proposed area covered under plantation with estimated budget cost is provided below:

Sl No.	Year	No. of Plants	Estimated Budget (Rs.)
1.	2024	31300	2754400
2.	2025	34250	3322250
3.	2026	34800	3723600
4.	Total	100,350	98,00,250

In view of above, it is hereby mention that OCPL is trying best to maintain the safety zone of project area with afforestation, fencing etc. Further, an undertaking with regards to the maintenance of safety zone as per prescribed norms in future also is also attached herewith as **Annexure (D)** for your kind consideration please.



Head of Mines
Odisha Coal and Power Ltd.

Photographs showing the fencing & protection of Safety zone area around mining lease area



Barbed wire fencing with pillars provided around safety zone area

Raddy
Head of Mines
Odisha Coal and Power Ltd.

Verification of Mine Boundary, Safety Zone, Pillar marking by Forest Officials



Verification of ML boundary and Pillars by DFO, Sundargarh and RCCF, Rourkela with their team



Safety Zone showing Pillars (6 feet and 4 feet height) and 7.5 m Green Belt



Verification of Safety Zone and Green Belt by Scientist 'B' (MoEF&CC, IRO) during their site visit

**Head of Mines
Odisha Coal and Power Ltd.**

Photographs showing plantation carried out in barren spaces of safety zone area



Coordinates – 21°58'23.60"N; 83°47'00.45"E



21°58'23.60"N; 83°47'00.45"E



21°58'27.80"N; 83°47'04.33"E

Reddy
Head of Mines
Odisha Coal and Power Ltd.

SCHEME FOR

FENCING, PROTECTION AND

AFFORESTATION OF THE SAFETY ZONE

AREA OVER 5.108 HA.

PERTAINING TO THE PROPOSAL FOR

DIVERSION OF 276.655 HA. FOREST LAND

WITHIN THE MINING LEASE

AREA OF 808.575 HA. IN MANOHARPUR COAL

BLOCK OF IB-VALLEY COAL FIELDS IN

SUNDARGARH FOREST DIVISION

BY

M/S ODISHA POWER GENERATION

CORPORATION LTD.

IN COMPLIANCE WITH CONDITION NO.2(xiii)

OF THE STAGE-I APPROVAL GRANTED BY

GOI,MOEF VIDE THEIR LETTER

F.NO.8-63/2011-FC DTD.17.10.2012.

SCHEME FOR FENCING, PROTECTION AND AFFORESTATION OF THE SAFETY ZONE OVER 5.108 HA. FOR DIVERSION OF 276.655 HA. FOREST LAND WITHIN THE MINING LEASE AREA OF 808.575 HA. IN MANOHARPUR COAL BLOCK OF IB VALLEY COALFIELDS BY M/S ODISHA POWER GENERATION CORPORATION LTD. IN SUNDARGARH DISTRICT OF ODISHA.

1. INTRODUCTION:

M/s Orissa Power Generation Corporation Ltd.(OPGCL) has been allocated over 800.575 hectares of lease area in Manoharpur Coal Block of IB Valley Coalfields under Hemgir Tahasil in Sundargarh District of Odisha by the Ministry of Coal, Govt. of India. The applied area of 276.655 ha. of virgin forest for non-forestry purposes includes 5.108 ha. towards Safety zone. The Govt. of India, Ministry of Environment & Forests vide their Letter **F.No. 8-63/2011-FC Dated.17.10.2012** have granted Stage-I approval for the above diversion. In this approval, Gol, MoEF have stipulated certain conditions for fulfillment. As per condition No.2 (xii) of the Stage-I approval order, the User Agency either himself or through State Forest Department shall have to undertake fencing, protection and regeneration of the Safety Zone area of the said mines at the project cost.

Hence, the present scheme aims at preparation of scheme for fencing, protection and regeneration of safety zone over 5.108 ha. within the lease area.

The location of the Safety zone area has been shown in the map enclosed in the Scheme vide **Annexure-III**.

2. TOPOGRAPHY AND SOIL:

The topography of the areas is mainly gentle slope and having some small hills. The soil is mostly sandy loam on the plain and gritty, hard compact and with morrum on the slope. The soil is mainly devoid of hummus, shallow in depth. The area experiences tropical climate with monsoonal rainfall.

3. EXISTING VEGETATION.

The vegetation comprises Sal, Asan, Kasi, Kendu, Char, Harida, Bahada, Kusuma, Sunari, Kurei etc.

4. OBJECTIVE OF THE SCHEME:

The objectives of the proposed scheme are as under:-

- i) To comply with the condition No.2 (xiii) of the Stage-I approval order granted vide MoEF Letter No.8-63/2011-FC dt.17.10.2012. The stipulation is as follows;

"The User Agency either himself or through the State Forest Department shall undertake fencing, protection and afforestation of the safety zone area (7.5 meter strip all along the outer boundary of the area identified to undertake mining), at the project cost"

- ii) To restock the degraded forest land within safety zone by planting suitable species.
- iii) To improve the micro-edaphic conditions by undertaking suitable soil and moisture conservation measures.
- iv) To protect the area against encroachment, illicit felling, fire occurrence, grazing etc., so as to check further degradation of the area.

5. PROPOSED TECHNIQUE:

To achieve the above objectives, it has been proposed to take up RDF plantation in ANR mode @ 300/ha. at a spacing of 2.50 mtr x 2.50 mtr in the gaps within the Safety Zone area of the mining lease of Manoharpur Coal Block of Ib Valley Coalfields by Odisha Power Generation Corporation Ltd.. The said plantation work will be done in the first year, followed by maintenance during 2nd, 3rd, 4th, 5th & 6th year. The detailed expenditure statement is enclosed as **Annexure-I**.

(A) Survey & Demarcation.

The M.L. area has been surveyed and demarcated in the field by the User Agency at their cost erecting 4 feet high reinforced concrete pillars inscribed with their serial number, forward and back bearing and distance from pillar to pillar as per specification, in consultation with the Range Officer, Hemgir. The outer perimeter of the safety zone area over 10864 RMT. will be fenced with barbed wire. Similarly, the inner perimeter of the safety zone area over 10789 RMT will also be fenced with barbed wire at the Project cost. Thus, total perimeter i.e., the outer and inner perimeter comes to 21653 RMT (10864 RMT + 10789 RMT).

(B). REGENERATION, CLEANING AND TENDING OPERATION:

The operation aims at tending the existing crop silviculturally for better growth. It involves removal of inferior and diseased tree growth. During this operation, climber etc which interferes with the growth of the principal and secondary species are to be cut. This operation helps sapling grow better and faster. The site clearance is to be done by cutting and removing the unwanted species.

The following operation will be carried out during the operation.

- i) Cutting back of individual inferior poles interfering with the growth of better ones.
- ii) Cutting back of malformed and diseased individuals.
- iii) Singling of coppice shoots & retaining healthier ones.
- iv) Cutting of climbers.

During 1st year operation, climber cutting, high stump cutting and cutting back of shrubs, herbs, malformed and diseased plants will be done.

(C) Plantation.

The safety zone area will be planted with indigenous species at a spacing of 2.5 mtr X 2.5 mtr. RDF Plantation in ANR mode @300 nos. of seedlings per ha. will be planted over the safety zone area of 5.108 ha. So,1532 nos. of seedlings will be required for planting over the entire area. As far as possible, species suitable for the site shall be planted as detailed below;

1. Teak (*Tectona grandis*)
2. Bamboo (*Dendrocalamus strictus*)
3. Bahada (*Terminalia belerica*)
4. Sisoo (*Dalbergia sissoo*)
5. Neem (*Azadirachta indica*)
6. Gambhar (*Gmelina arborea*)
7. Harida (*Terminalia chebula*)

The following items of work will be taken up for planting the area.

(i) Raising of Nursery :-

Seedlings for plantation will be raised in a temporary nursery nearer to the site where water source is available. 20% more seedlings than the actual requirement will be raised in the nursery to meet the casualties and damage due to transportation and unforeseen causes. Seedlings will be raised in polythene bags of 9" x 5" size following standard nursery practice.

(ii) Site Clearance:

The miscellaneous unwanted growths in the Safety Zone area will be cleared before taking up pitting work.

iii) Alignment and pitting.

Alignment and pitting will be taken up in March-April. Pits of size 30 cm x 30 cm x 30 cm will be dug, maintaining a spacing of 2.5 mtr. X 2.5 mtr. in the safety zone area.

iv) Actual planting.

Planting will be carried out just after 1st regular monsoon shower and will be completed latest by 2nd week of July. A basal dose of NPK fertilizer @ 30 gms. per plant will be applied at the time of plantation. Chloropyriphus (insecticide) will be applied to each pit to protect the plants against termite attack. Casualties noticed, if any, will be replaced with the excess seedlings raised for the purpose when required.

v) Weeding, Soil working and Manuring.

For establishment and better growth of the planted seedlings, weeding and manuring are necessary. It is prescribed to carry out two weeding during first year, and one weeding each during second and third year. After each weeding, soil working will be done around each plant at a radius of 0.5 m., followed by manuring @ 20 gms. of Urea per plant.

(vi) Application of Insecticides.

To get rid of insect attack, application of insecticides will be taken up inside the plantation area as and when required. Spraying of insecticides shall be done preferably in a sunny day in the forenoon.

(vii) Fire line tracing and maintenance.

Because of the mining activities, possibility of fire occurrence in the planted area can not be ruled out. So, it is proposed that the boundary of the planted area will be scrapped off to a width of 3 mtr. to preclude occurrence of fire.

(D) Soil and Moisture Conservation.

Since the area is undulating, soil and moisture conservation work will be taken up by constructing small loose boulder structures / staggered trenches / contour trenches, drainage line treatment, percolation pit etc. as per the field requirement. For the purpose 20 MD per ha. has been provided.

(E) Fencing.

As this patch is located around the mining area, there is possibility of grazing by stray animals. As per the stipulation, barbed wire fencing along the outer periphery of the Safety Zone over a length of 10864 RMT. with eight strands of barbed wire & 2 cross supported by fixing RCC fence posts at a spacing of 2.5 mtr. will be done. In the same way, it is proposed to fence the inner perimeter of the mining lease boundary of safety zone area over a length of 10789 RMT. The fence on both sides of Safety Zone will be raised by User Agency himself. In addition to fencing, the User Agency should also engage a Security Guard round the clock at his own cost for watch & ward of the plantation in addition to the norm provided in **Annexure-II**. The User Agency has furnished an undertaking to complete the fencing work within a month of approval of this scheme which is enclosed vide **Annexure-III**.

(F) Executing Agency:

As the area is located around the Mines and very small, it is proposed that the User Agency shall execute the fencing work and the Forest Department shall execute and maintain the Safety Zone plantation.

FINANCIAL FORECAST.

For implementation of all the prescriptions outlined above Rs. 3,20,14,988.00/- (Rupees Three crore twenty lakh fourteen thousand nine hundred eighty eight) only will be required as detailed below. As there will be time lag between the preparation of the scheme and its implementation, 20% escalation cost over and above the plantation cost has been provided. As the User Agency shall execute the barbed wire fencing and engage a Security Guard on their own at the cost of Rs. 3,06,11,250.00, they have to pay only the cost of plantation and its maintenance amounting to Rs. 14,03,800.00 to be executed by the DFO, Sundargarh.

To be executed by DFO			
1.	RDF Plantation in ANR mode over 5.108 ha. @ Rs.97650/- per ha. including watering charges @Rs.24000/- per year for 1 st , 2 nd & 3 rd year	Rs	4,98,796.00
2.	Clearance of weeds, cutting of climbers, singling of economically important species @5 MD / ha. / year for next 2 years. i.e., 2 nd & 3 rd year.	Rs	7662.00
3.	Soil Moisture Conservation @ 20 MD per ha.	Rs	15324.00
4.	Plantation watcher 2 no. (2 x 4500 x 12 x 6)	Rs	6,48,000.00
	Sub-total:	Rs	11,69,782.00
	Add 20% escalation	Rs	2,33,956.00
(a)	Total:	Rs	14,03,738.00 or say 14,03,800.00
To be executed by User Agency			
1	Barbed wire Fencing over 21.653 Kms. @11,25,000/- per Km. (Both outer & inner periphery of the Safety Zone).	Rs	2,43,59,625.00
2	Security Guard 3 no. (3 x150 x 365 x 7)	Rs	11,49,750.00
	Sub-total :-	Rs	2,55,09,375.00
	Add 20% escalation	Rs	51,01,875.00
(b)	Total:-	Rs	3,06,11,250.00
	Grand Total (a+b):-	Rs	3,20,14,988.00

(Rupees Three crore twenty lakh fourteen thousand nine hundred eighty eight) only

Technically
Approved

Regional Chief Conservator of Forests
Rourkela Circle, Rourkela

Divisional Forest Officer,
Sundargarh Division.

Divisional Forest Officer
Sundargarh Division

ANNEXURE-II

COST ESTIMATE FOR (RDF) PLANTATION OF 300 SEEDLINGS/HECT.

1.	Type of the Plantation.	RDF Plantation.
2.	No. of seedlings to be planted.	300 Nos. per hectare
3.	Spacing to be adopted.	2.5m x 2.5m
4.	Size of pits.	30cm x 30cm x 30cm
5.	Wage rate.	Rs 150/- per manday.

0th year (Advance work) Pre-planting operation.

Sl. No.	Item of work	Mandays	Labour rate @ Rs 150/-	Material cost.	Total.
1	2	3	4	5	6
1.	Survey, Demarcation & pillar posting.	2	300.00	-	300.00
2.	Site preparation.	2	300.00	-	300.00
3.	Cutting of high stumps.	3	450.00	-	450.00
4.	Alignment and stacking of pits	1	150.00	-	150.00
5.	Pitting (30 cm. cube)	8	1200.00	-	1200.00
6.	Cost of raising 300 seedlings (Part)	14	1200.00	900.00	2100.00
	Sub Total	30	3600.00	900.00	4500.00
1stYear/ Planting					
7	Cost of raising 300 seedlings (Balance)	6	900.00	-	900.00
8	Carriage of seedlings to site cleaning including casualty replacement.	6	900.00	-	900.00
9	1 st Weeding	2	300.00		300.00
10	2 nd Weeding	2	300.00		300.00
11	Soil working	2	300.00		300.00
12	Manuring /Insecticide application	1	150.00		150.00
13	Fireline tracing and inspection path	2	300.00		300.00
14	Cost of insecticides for plantation	3	0	450.00	450.00
15	Cost of chemical fertilizer for plantation 12 Kg. @ Rs. 35/-	6	0	900.00	900.00
16	Silvicultural operation involving clearance of weeds and cutting of climbers, sigling of shoots on each stool etc.	15	2250.00		2250.00
17	Soil Conservation	12	1800.00		1800.00
18	Watch and ward	5	750.00		750.00
19	Contingencies	3	0	0	450.00
20	Watering at least 10 days in a month for 5 month on LS				24000.00
	Sub Total	65	7950.00	1350.00	33750.00
2nd Year Maintenance					
21	Casualty replacement with nursery cost	2	300.00	-	300.00
22	Complete Weeding & Pruning	2	300.00		300.00
23	Soil working and manuring	2	300.00		300.00
24	Fire line tracing.	1	150.00		150.00
25	Cost of fertilizer	4		600.00	600.00
26	Soil Conservation	6	900.00		900.00
27	Watch and ward	8	1200.00	0	1200.00
28	Contingencies	2			300.00
29	Watering at least 6 days in a month for 8 month(April to July & Dec to March) on LS				24000.00
	Sub Total	27	3150.00	600.00	28050.00

Sl. No.	Item of work	Mandays	Labour rate @ Rs 150/-	Material cost.	Total.
1	2	3	4	5	6
3rd Year maintenance					
30	Weeding and pruning	2	300.00		300.00
31	Soil working	2	300.00		300.00
32	Fire line tracing.	1	150.00		150.00
33	Soil Conservation	6	900.00		900.00
34	Watch and ward	6	900.00		900.00
35	Contingencies	2			300.00
36	Watering at least 6 days in a month for 8 month(April to July & Dec to March) on LS				24000.00
	Sub Total	19	2550.00		26850.00
4th Year maintenance					
37	Weeding and pruning	2	300.00		300.00
38	Fire line tracing.(2 mt. wide fire line over 400 mt. long)	1	150.00		150.00
39	Watch and ward	6	900.00		900.00
40	Contingencies	1			150.00
	Sub Total	10	1350.00		1500.00
5th Year maintenance					
41	Weeding and pruning	2	300.00		300.00
42	Fire line tracing.(2 mt. wide fire line over 400 mt. long)	1	150.00		150.00
43	Watch and ward	6	900.00		900.00
44	Contingencies	1			150.00
	Sub Total	10	1350.00		1500.00
6th Year maintenance					
45	Weeding and pruning	2	300.00		300.00
46	Fire line tracing.(2 mt. wide fire line over 400 mt. long)	1	150.00		150.00
47	Watch and ward	6	900.00		900.00
48	Contingencies	1			150.00
	Sub Total	10	1350.00		1500.00
	Grand Total	171	21300.00	2850.00	97650.00

ABSTRACT

Year	Labour	Material	Contingencies	Total
0 th Year	3600.00	900.00	0	4500.00
1 st Year	7950.00	1350.00	450.00	33750.00
2 nd Year	3150.00	600.00	300.00	28050.00
3 rd Year	2550.00	0	300.00	26850.00
4 th Year	1350.00	0	150.00	1500.00
5 th Year	1350.00	0	150.00	1500.00
6 th Year	1350.00	0	150.00	1500.00
Total	21300.00	2850.00	1500.00	97650.00
Person days Equivalent	14	19	10	171

NB:- The watering provision has provided for first 3 years basing on the norm of urban tree plantation to ensure better growth and survivability.


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ANNEXURE-II

ESTIMATE FOR BARBED WIRE FENCING

Estimate for 1 kilometer

1. No. of Pillars required	:	500 Nos.
Cost of 1 Pillar	:	Rs 568.00
Transportation charges to the site	:	Rs 244.00
Cost of base fixing	:	Rs 244.00
Cost of fixing barbed wire @ Rs 49.0	:	Rs 49.00
Total cost for Fixing 1 pillar	:	Rs 1105.00
Total cost for fixing 500 pillars	:	Rs 5,52,000.00
Cost of Barbed wire (1 Qtls.) Rs 13,200.00		
Cost of Barbed wire (5+2 strand)		
7500 Mtrs or 15 Qtls.	:	Rs 1,98,000.00
2. Total Cost for fencing 1 KM.	:	Rs 7,50,000.00
3. Maintenance for 2 nd year (10%)	:	Rs 75,000.00
4. Maintenance for 3 rd year (10%)	:	Rs 75,000.00
5. Maintenance for 4 th year (10%)	:	Rs 75,000.00
6. Maintenance for 5 th year (10%)	:	Rs 75,000.00
7. Maintenance for 6 th year (10%)	:	Rs 75,000.00
8. Total Cost for fencing with Maint. for 1 KM.	:	Rs 11,25,000.00


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