



भारत सरकार / Government of India  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
Ministry of Environment, Forest & Climate Change  
क्षेत्रीय कार्यालय/ Regional Office

पता: द्वितीय तल, झारखण्ड राज्य आवास बोर्ड मुख्यालय, हरमू चौक, राँची, झारखण्ड - 834002  
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संख्या: FP/JH/MIN/140599/2021/102

दिनांक: 08.02.2024

सेवा में,

सहायक वन महानिरीक्षक, एफ.सी. डिवीजन,  
पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय,  
इंदिरा पर्यावरण भवन अलीगंज,  
जोरबाग रोड नई दिल्ली-110003.

**Subject: Proposal for diversion of 699.38 Ha. (400.96 Ha. in Chatra South Forest Division and 298.42 Ha. in Hazaribagh West Forest Division) of forest land for Chandragupt Opencast Coal mining project in favour of M/s Central Coalfield Limited in Jharkhand (Online No. FP/JH/MIN/140599/2021)-regarding.**

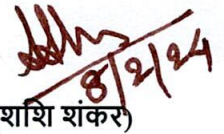
*Reference: Ministry's letter no. 8-24/2023-FC dated 22.09.2023.*

महोदय,

उपरोक्त विषयान्तर्गत श्रीमान के संदर्भित पत्र के आलोक में परियोजना से संबंधित वाँछित स्थल निरीक्षण क्षेत्रीय कार्यालय राँची द्वारा दिनांक **11-15 जनवरी 2024** को किया जाकर तैयार प्रतिवेदन को विभागाध्यक्ष के अनुमोदनोपरांत उनकी संस्तुति के साथ संलग्न प्रेषित किया जाता है ।

संलग्न:- यथा उक्त ।

आपका विश्वासभाजन



(शशि शंकर)

सहायक वन महानिरीक्षक

## **SITE INSPECTION REPORT**

### **Proposal under Forest (Conservation) Act 1980 for diversion of 699.38 ha. of forest land for Chandragupt Open Cast Coal Mines project in favour of M/s CCL in Chatra and Hazaribag district of Jharkhand.**

An FC proposal with online proposal no. FP/JH/MIN/140599/2021 is under processing at the ministry which solicits for diversion of 699.38Ha of forest land in the districts of Hazaribagh and Chatra of Jharkhand in favour of M/s Central Coalfields Limited (CCL) for Chandragupt Open Cast Coal Mining Project. As per the provisions of relevant FC Rules, ministry (MoEFCC) has requested this Regional Office (vide its letter dated: 22.09.2023) to inspect the forest land proposed for diversion, areas identified for raising compensatory afforestation (CA) and submit the detailed site inspection report (SIR) with clear recommendations to this Ministry (**Annexure-I**).

Accordingly, the site inspection was done by a team of Regional Office (RO) Ranchi comprising of Shashi Shankar, AIGF and Sri Surajit Panda, Sr. Technical Associate along with the concerned state forest officials as well as representatives of user agency during 11-15<sup>th</sup> January 2024. The following officials accompanied the team during site inspection: -

- Sh. Mukesh Kumar IFS, DFO Chatra South Forest Division
- Sh. Mukti Prakash Panna, RFO Chatra South Forest Division
- Sh. A. K. Singh, GM, CCL
- Sh. Omprakash Ranjan, Dy. Manager (Env. & Forest), CCL
- Sh. Rabindar Kumar, Surveyor, Chandragupta OCP, CCL
- Sh. Vivek Kumar, Manager, Chandragupt OCP, CCL
- Sh. Subhas Gupta, PO CCL
- Sh. Laltu Kumar, Forest Guard
- Sh. Rakesh Kumar, Forest Guard
- Sh. Satyanarayan Ravidas, Forest Guard
- Sh. Shiv Ram, Sushee Chandragupta Coal Mine Pvt. Ltd. & others.

### **The site inspection of the Forest Area (699.38 ha.) proposed for diversion:**

#### **Salient features of the proposal:**

The CCL has conceived Chandragupta OCP for coal mining in an entire lease area of 1495 Ha in Hazaribagh and Chatra districts of Jharkhand state. The total lease area has 699.38 ha of forest area from Chatra South (400.96 ha) and Hazaribagh West (298.42 ha) Forest Divisions of the state. The lease area falls in 9 villages and includes 795.62 ha. non- forest area.

The details of the land involved in the proposal are presented in the following tables.

District wise land Details (Area in ha.)

Chatra District		Hazaribagh District	
Forest Land	Non-Forest Land	Forest Land	Non-Forest Land
21.7	38.13	677.68	757.49

Forest Divisions wise land Details (Area in ha.)

Chatra South Forest Divisions			Hazaribagh West Forest Divisions		
Forest Land		Non-Forest Land	Forest Land		Non-Forest Land
PF	JJ		PF	JJ	
238.64	162.32	710.04	295.46	2.96	85.58
400.96			298.42		

From the above table it is evident that 165.28 ha (162.32Ha in Chatra South and 2.96Ha in Hazaribagh West) of GMJJ (Gair Majarua Jungle Jhadi) forest land is involved in the proposal. This type of forest land is under administrative jurisdiction of State Revenue Department and mostly fragmented under individual khatedari rights. This type of land is neither under administrative control of State Forest Department nor is managed by it.

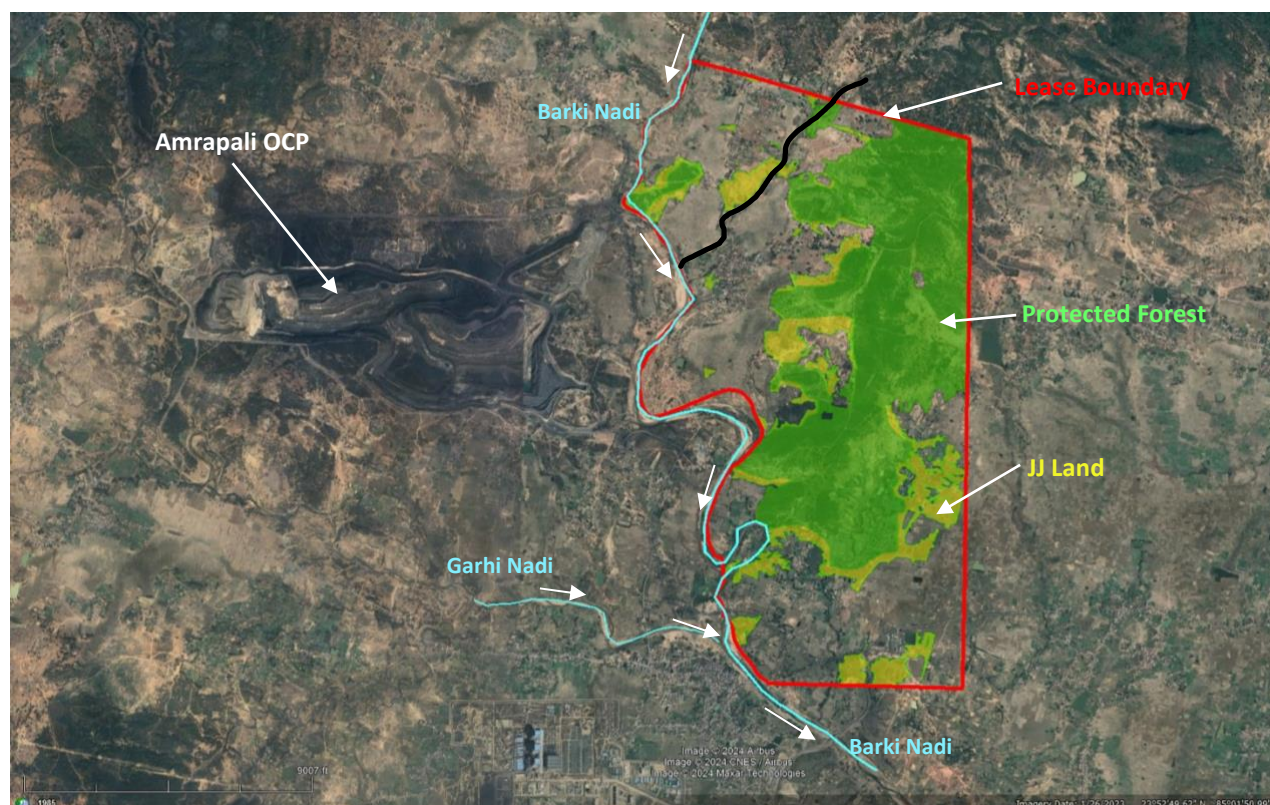
The entire lease has been occupied under CBA Act 1957 for mining the estimated minable coal reserve of 527.3MT. The project is anticipated to run for about 40 years with average annual production of around 15 MT of coal.

The visiting team of RO Ranchi asked why this project is conceived as Open-cast and not Underground mining project which would have saved surface amenities including forests and villages? The representatives of user agency replied that the coal seam in the region has varying depth. At few places in the lease, the coal seam starts from depth as shallow as 10ft. Further, the coal seam is spread across the entire area with several geological disturbances in terms of faults and steep dips would make underground mining not very facile. It was also told that underground mining would reduce the efficiency of the minable reserve to its mere 30%. Therefore, the opencast system has been preferred over underground. The outcrops of coal seam visible at places during the site-visit indicated the shallow depth of coal beds in the area.

**Situation/location of the proposed project:**

The proposed project is situated in the coal bearing areas of Chatra and Hazaribagh districts of Jharkhand. This region is part of Pachra Block and Pachra South Coal bearing Geological Block. Several Coal mines are operating and planned in the vicinity of this project. Amrapali OCP of same user agency is situated in west and is separated by this proposal's lease area by Baraki/Badaki River. NTPC's Chatti-Bariyatu operative coal mine too is located in the vicinity. There is a small tributary of Baraki river called Chotaki nala flows in the north side (westwards) of the lease and merges with Baraki river. Similarly, Garhi river, a tributary of Baraki river also merges with the latter but its course is not through lease. Project proponent representatives apprised the visiting team that according to CMPDI report, mining will not have any impact on the surface hydrology of Baraki river

**(Annexure-II).** The surface hydrological features along with the types of land involved in the proposal is depicted in the illustrating satellite imagery below:



### **Forest Land involved in the proposed project:**

The total 699.38 Ha of forest includes 165.28 Ha of GMJJ land for which user agency has obtained permission from State Revenue Department. The DFO present there apprised that since such forest lands are not managed by State Forest Department but State Revenue Department, the NOC towards such land is issued by Revenue authorities subject to approval under FC Act.

The forest land involved in the lease fall in 7 village mauzas under two forest divisions namely Chatra South and Hazaribagh West. During the site inspection following points were ascertained:

- i. The proposed area does not form part of any National Park, Wildlife Sanctuary, and Biosphere/Tiger Reserve, Elephant Corridor or ecologically or culturally protected/restricted area, etc. Although movement of wild animals was not seen in that area during the visit, the DFO and forest staff present there apprised that elephants sometimes come in the area but it is not frequented by their visits or stay. User agency representative informed that a specific wildlife management plan is already under final stage of preparation which shall be ratified by the CWLW of the state for its timely implementation.

- ii.** During inspection it was observed that no work in violation has started in forest area by user agency in relation to the proposed project. Also, no significant encroachment in the forest area was seen during the visit.
- iii.** The region is dominated by undulating topography covered by sedimentary rocks with some rocky surfaces. The colour of the soil is reddish brown or yellowish red colour group. The depth of soil varies from place to place, at some places formed gullies depict 10-12ft soil thickness whereas some surface outcrops of coal beds exhibit very less soil depth at places. Should the proposed project gets implemented, the top-soil management/preservation must be ensured.
- iv.** The area proposed for diversion is a predominant Sal-forest with various mixed deciduous forest species. The vegetative indices vary from place to place again. Few patches show considerable closed canopy with similar-aged Sal crops which are said to be the result of silvicultural practices adopted in past. Working plan prescription for the forest land proposed for diversion are coppice with standard (CWS) working circle. The field officers have reported that no silvicultural practices have been done in the area for last two plan periods owing to the potential coal reserve exploitation in future. They also informed that few patches of forest were subjected to Eucalyptus plantation too in the past. Ocular estimated average canopy density of the region is 0.5-0.6. There are substantial patches devoid of significant vegetation. The detailed forest cover information as examined and obtained from the DSS analysis of the region is shown in the table below:

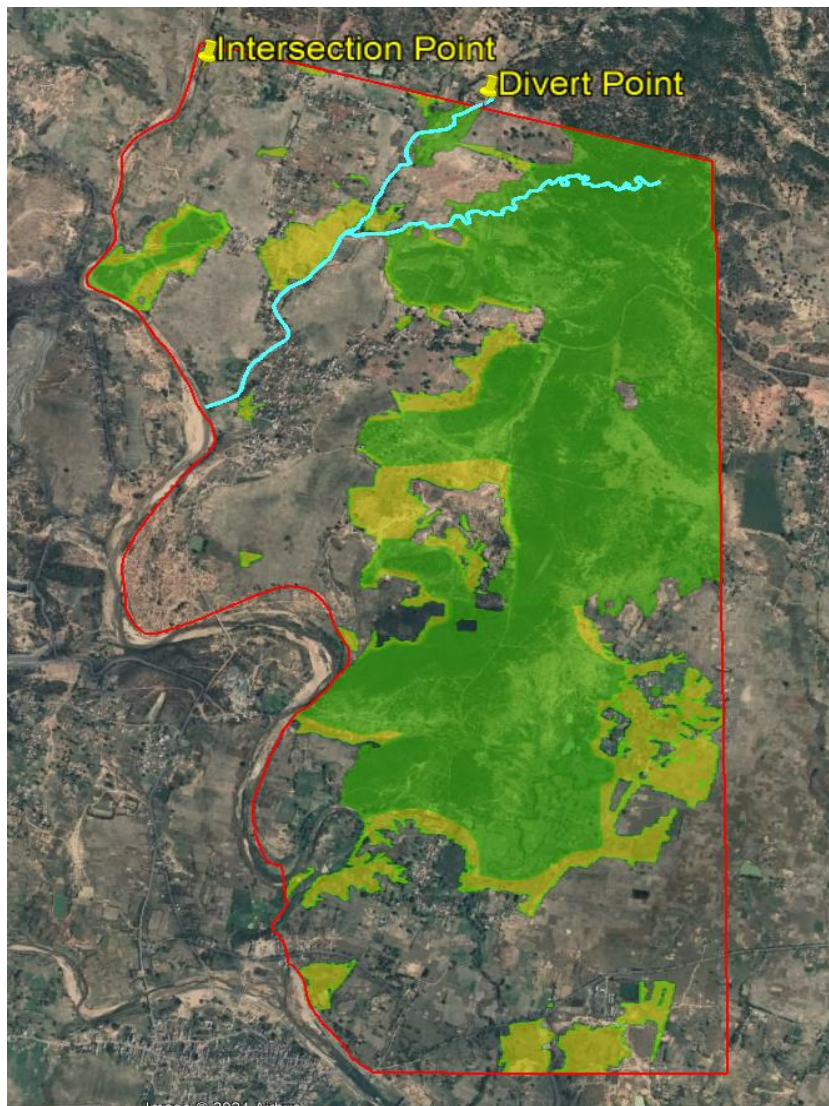
Forest cover information of the project area (Area in ha.)

FCM	MDF	VDF	NON FOREST	OPEN FOREST	SCRUB	Total area (ha.)
Proposed Land	00.00	00.00	506.00	141.00	53.00	700.00

Proposed land area estimated using DSS is 700.00 ha. The forest cover of the area reveals that corresponding area falling under Non Forest, Open Forest and Scrub category are 506.00 ha., 141.00 ha, 53.00 ha., and 36.00 ha. respectively

- v.** The DFO informed that while examining the proposal it was ensured that forest diversion is sought for site-specific activities only and no component of the project was allowed to be applied in forest area which otherwise could be established in non-forest area. The representative of user agency informed that keeping the bare-minimum use of forest area as a top priority, they have identified land for OB Dump in their adjacent Amrapali OCP. Similarly, no forest land is proposed to be used for developing infrastructural facilities for the project.
- vi.** The coinciding with entire lease boundary in the western side of the lease, Baraki river flows. It is a very important river for the local. When enquired about the impact of proposed mining on the river, the user agency informed that this river not only constitutes the western boundary of extant lease but also forms the eastern boundary of Amrapali OCP where mining operation is on for years. No ill-impact on this river and its hydrology has happened due to mining in Amrapali OCP and the same shall be ensured for Chandragupt OCP too. The DFO informed that there shall be a green-belt of 60 meters width all along the river course within the mining lease and any mining/ancillary activity shall start only beyond this zone. The project

proponents emphasized that the excavation activities or coal extraction process would take place beyond 60 meters of the banks of Barki River. Further, there is not any significant stream flowing through the lease area except Chotki Nala which is a seasonal stream in the northern side of the lease finally merging into Barki river as per the imagery below. User agency informed that this stream would require diversion to ensure that water regime of Barki river is not disturbed due to the proposed project. The forest staff present there told that this Chotki Nala is small stream which dries up in February-March every year. The inspecting team visited the areas where Chotki Nala passes and found it to be a small stream of 5-7 meters wide course with very less water. This stream is intended for diversion along the northern boundary of the lease into Barki river. Few photographs of Chotki Nala is shown below. The project proponent also informed that they have procured required permission to divert the Chotki Nala from water Resource Department, Govt. of Jharkhand vide letter dated 25.11.2013 (**Annexure-III**). Further, project proponents apprised that Chotki Nala will be diverted as per approved plan and route of Indian Institute of Technology (IIT) Roorkee (**Annexure-IV**). The divert point and intersection point of Barki Nadi and Chotki Nala (Sky blue in figure) is directed in figure below:





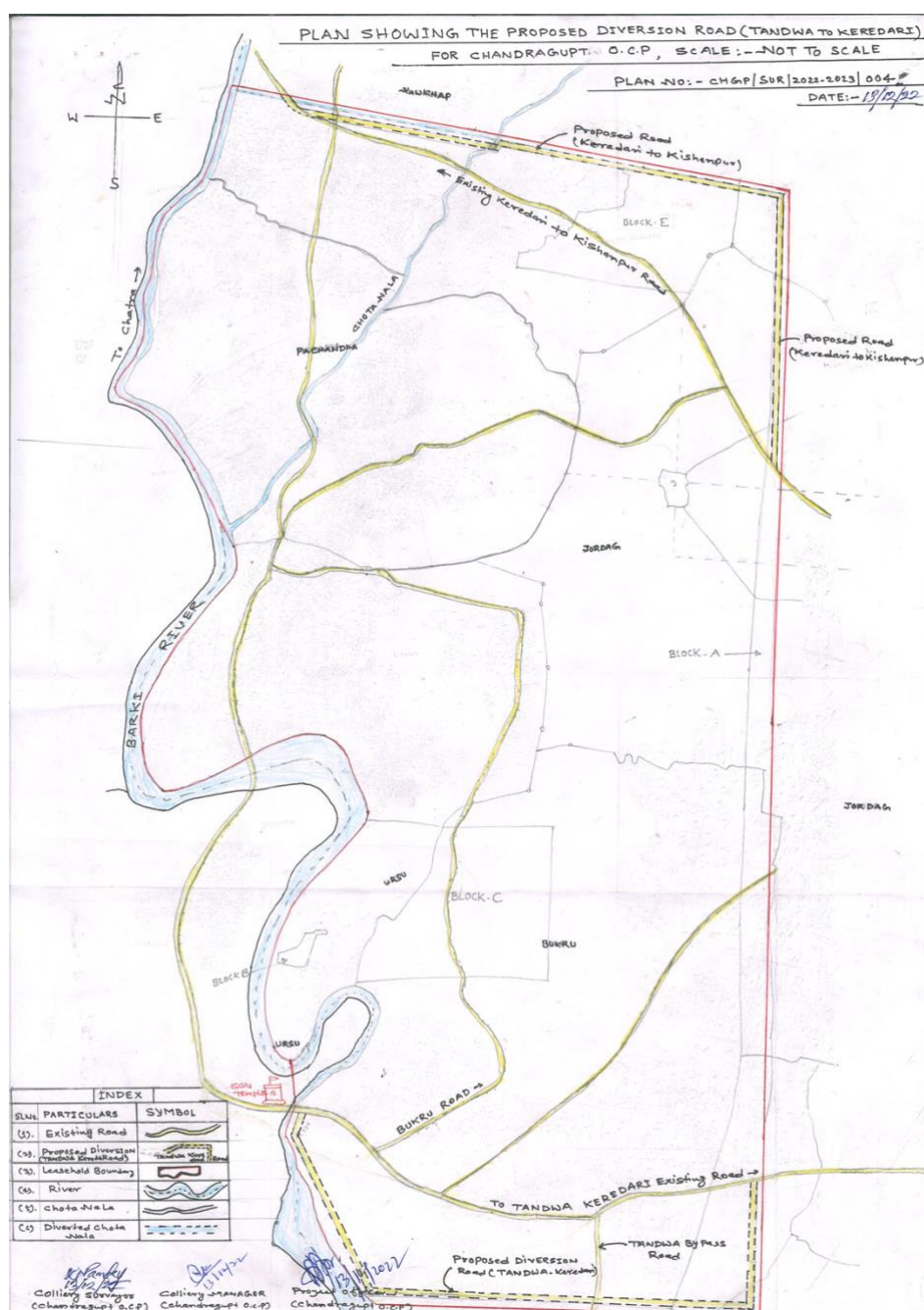
- vii.** It was observed that the perimeter of entire lease area is around 16-17 kms out of which around 10 kms coincides with the course river and other 3-4kms with the forest area. Therefore, there is readily available possibility of developing these natural features as shelter belt to minimize the horizontal trickling of ill-impacts beyond the lease boundary.

**Social/Local issues involved in the proposed project:**

This project is spread in 9 villages of the two districts. The project being an open cast mining project hence would require resettlement and rehabilitation of the local residents. The project proponent representative apprised that there are around 1600 families who shall be appropriately resettled and rehabilitated. He informed that R&R Plan is already in its final stage of preparation. He further added, the proposed project is likely to generate around 1500 permanent employment majority of which shall go to the project affected families. DFO apprised that there are no settlements located in the forest area involved hence no specific resettlement plan is required for forest area.

During the visit it was observed that few prominent roads are passing through the lease area. When enquired, the representative of user agency apprised that there are two significant roads passing through the lease namely, Tandwa-Keredari Road and Keredari-Kishanpur Road. Plan to realign these roads are already finalized. He told that these roads would be realigned along the periphery of the lease boundary within the lease area. He also informed that 7.5meters of safety belt shall be maintained all along the road. The visiting team asked the DFO about the feasibility of raising road side plantation all along the realigned roads (both sides) by forest department on project cost. The DFO informed that forest department is actively taking up road plantation in mining affected roads in the vicinity and even on these roads SFD has done road-side plantation successfully. Therefore, this proposition may be included in the proposal at project cost. Both, UA & SFD officials present there assured that existing transportation facility shall not be impeded due to the proposed project. Further, the user agency informed that they have already applied to RCD, Hazaribagh in Jharkhand for approval for aforesaid road sifting (**Annexure-V**). The existing boards within/through the lease and their potential shifting/realigning plan is depicted in the following map:





The DFO informed that the extant project is likely to remove huge amount of top-soil from the lease area and is likely to generate tremendous amount of OverBurden. No forest area is being diverted either to store the removed top-soil or to dump the OB as they are planned in Amrapali OCP. The visiting team enquired about the method of transporataion of top-soil/OB to Amrapali OCP area as these two are separated by continuous Baraki river. The user agency informed that a high-level bridge over Barki river shall be built near Serandag Chowk ( $23^{\circ}54'6.85''N$ ,  $85^{\circ} 1'15.66''E$ ) to transport the Top-soil/OB dump from Chandragupta project side to Amrapali OCP area. The same bridge shall be used for coal evacuation to the Amrapali railway siding which has recently received in-principle approval for the forest land involved in its construction owing to environmental friendly method of coal-transportation. Therefore, the coal produced from this proposed project shall not be transported by road beyond the mining lease thereby causing no potential environmental hazard to the locals.

Some field photographs taken during the site inspection visit of proposed forest area are given below:











**Observations on the CA area:**

The Compensatory Afforestation (CA) against the above proposal is proposed on around 1400.329 ha. of Degraded Forest Land (DFL) in Chatra and Hazaribagh districts. The entire CA land is comprised in 27 discrete patches located in various forest blocks of different Mauzas (Villages).

Though with new '**VAN (SANRAKSHAN EVAM SAMVARDHAN) RULES, 2023**' - becoming effective from 1<sup>st</sup> December 2023, the visit to CA DFL areas which are proposed against this proposal turned futile, yet, these areas were visited as per demand of ministry's site-inspection letter. Therefore, the present CA DFL site visit was made but the visit was not exhaustive (not all CA DFL patches were visited by RO Team). The findings of the CA DFL areas on basis of physical visit as well as examination of GIS-DSS outcomes, and satellite data analysis are highlighted below: -

Sl.No.	Name of the CA site	Area (ha.)	District	Total area (ha.)
1	Marangi	81.87	Chatra	911.83
2	Unta	50.00		
3	Sinduari Khurd	49.93		
4	Chiraiya	63.25		
5	Dahu	37.72		
6	Damodoiya	23.71		
7	Kandalga	47.24		
8	Kalajeerma	9.99		
9	Lemboiya	115.25		
10	Mahuari	45.86		
11	Nauniachua	209.13		
12	Nayakhap	76.85		
13	Padampur	28.03		
14	Pahara	36.95		
15	Pitiz	36.06		
16	Mungarmao	19.92	Hazaribagh	488.50
17	Chandgarh	64.71		
18	Jarahiya	34.04		
19	Lachudih	39.92		
20	Badia Jawar	38.01		
21	Balori	67.95		
22	Basaria	10.02		
23	Jatghaghara	16.00		
24	Kendua	73.60		
25	Lokea	49.97		
26	Madhuban	25.01		
27	Simra Kurha	49.35		
<b>Total area in ha.</b>				<b>1400.33</b>

1. No encroachment on the proposed CA DFL was visible during the visit. Geospatial analysis from satellite images also did not reveal any encroachment on applied CA land. It is also observed that there are no small discrete CA polygons (kmL/area) with area less than 5 ha.

2. It is found that proposed CA land is more or less suitable for plantation except Badia Jawar CA patches. An area of 10 hectares out of 38 hectares of the Badia Java CA patch is showing MDF. Although the forest staff apprised that the vegetation is bushy in nature. The remaining identified CA lands are mostly barren land and covered with Scrub/bushes, suitable for plantation except some small patches of vegetation. The details Forest cover information of CA land are as follows:

Forest cover information of the CA land (Area in ha.)

Sl. No.	Name of CA site	FCM					Total area (ha.)
		VDF	MDF	NON FOREST	OPEN FOREST	SCRUB	
1	Marangi	0.00	0.00	44.00	2.00	36.00	82.00
2	Mungarmao	0.00	0.00	7.00	13.00	0.00	20.00
3	Chandgarh	0.00	0.00	8.00	56.00	0.00	64.00
4	Jarahiya	0.00	0.00	34.00	0.00	0.00	34.00
5	Unta	0.00	0.00	0.00	50.00	0.00	50.00
6	Sinduari Khurd	0.00	0.00	50.00	0.00	0.00	50.00
7	Lachudih	0.00	0.00	39.00	1.00	0.00	40.00
8	Badia Jawar	0.00	10.00	23.00	5.00	0.00	38.00
9	Balori	0.00	0.00	68.00	0.00	0.00	68.00
10	Basaria	0.00	0.00	10.00	0.00	0.00	10.00
11	Chiraiya	0.00	0.00	50.00	13.00	0.00	63.00
12	Dahu	0.00	0.00	38.00	0.00	0.00	38.00
13	Damodoiya	0.00	0.00	24.00	0.00	0.00	24.00
14	Kandalga	0.00	0.00	41.00	6.00	0.00	47.00
15	Jatghaghara	0.00	0.00	16.00	0.00	0.00	16.00
16	Kalajeerma	0.00	2.00	4.00	4.00	0.00	10.00
17	Kendua	0.00	0.00	58.00	14.00	1.00	73.00
18	Lemboiya	0.00	0.00	109.00	6.00	0.00	115.00
19	Lokea	0.00	0.00	50.00	0.00	0.00	50.00
20	Madhuban	0.00	0.00	25.00	0.00	0.00	25.00
21	Mahuari	0.00	0.00	43.00	2.00	0.00	45.00
22	Nauniachua	0.00	0.00	163.00	46.00	0.00	209.00
23	Nayakhap	0.00	0.00	73.00	3.00	0.00	76.00
24	Padampur	0.00	1.00	13.00	15.00	0.00	29.00
25	Pahara	0.00	1.00	17.00	20.00	0.00	38.00
26	Simra Kurha	0.00	0.00	42.00	7.00	0.00	49.00
27	Pitiz	0.00	2.00	26.00	8.00	1.00	37.00
Total area (ha.)		0.00	16.00	1075.00	271.00	38.00	1400.00

CA land area estimated using DSS is 1400.00 ha. The forest cover of the CA area reveals that corresponding area falling under MDF, Non Forest, Open Forest and Scrub category are 16.00 ha., 1075.00 ha., 271.00 ha., and 38.00 ha. respectively.

3. From the above, it is evident that the net area of the proposed CA DFL is otherwise appropriate for plantation.



Few photographs depicting the proposed CA DFL sites present condition are given below:



### **Conclusion/recommendation:**

The extant proposal for diversion of 699.38Ha forest area in the districts of Chatra and Hazaribagh of the state of Jharkhand has been duly processed by the state government and the project has been recommended for approval by every processing authority including DFOs, Nodal Office and state government without any adverse comment. The visiting team of RO Ranchi also observed that the proposal is site-specific due to the existence of coal bearing beds beneath the applied forests. Also, no significant non-site-specific component is proposed in the applied forest area.

Considering the necessity of this vital energy resource towards fueling the process of national development, this proposal may be considered for recommendation but efforts must be made to minimize the impact of the project on the forest, flora, fauna and the environment of the surroundings. Therefore, certain impact minimizing measures like Site Specific Wildlife Management Plan, Top Soil Management Plan, Barki river Catchment Area Treatment Plan, R & R Plan, Safety Zone maintenance all along the periphery of the lease and effective

progressive Mine-Closure Plan should be conceptualized and implemented at project cost in the project operation phase.

**Signature****Name and Designation of Inspecting Officer:**Signed by Shashi Shankar  
PathakDate: 07-02-2024 16:17:47  
(Shashi Shankar)Assistant Inspector General of Forests  
RO, Ranchi

## Recommendation of DDGF

- The AIG has visited the proposed site and recommended for diversion of forest land.
- As per this new guideline the notified degraded forest is not allowed for CA; So the project proponent will have to identify equivalent non forest land or double the area of revenue forest land for CA.
- To mitigate the impact of mining on wildlife, a site specific wildlife conservation plan duly approved by CWLW may be prepared.
- To mitigate the impact on Catchment of water of Barki River and diversion of nala, a catchment treatment plan may be prepared.
- To minimize the impact of tree felling, tree felling should be done only when it is absolutely required to remove the tree. As far as possible transplantation of tree may be done.
- As mining of coal is a site specific activity, the mining of coal in 699.38 Ha. of forest land is being recommended with standard conditions and observation made during inspections.

Signature

Name and Designation of SIR approving Officer:



(A. T. Mishra)

Dy. Director General of Forests  
RO, Ranchi