#### SITE INSPECTION REPORT

NameoftheProposal:-

Diversion of 682.2722 Ha(570.100 Ha inside lease and 112.1722 Ha outside lease) forest land for Bailadila Iron Ore Deposit-4 Mine in Dantewada Forest Division, SouthBastar, Dantewada District in the State of Chhattisgarh-reg in favour ofNMDC-CMDC Limited Under Section -2 of Van (Sanrakshan Evam Samvardhan Adhiniyam, 1980 (Proposal No. FP/CG/MIN/146694/2021)

Inspectiondoneby-

Shri C.B.Tashildar, (IFS, Assistant Inspector General of Forests (Central), (Regional Office, MoEF&CC, Nagpur)

#### OfficialsfromtheStateForest Department

- 1. Smt Draupadi Thakur, SDO Dantewada, Dantewada Division
- 2. Shri Ashutosh Mandwa, Range Forest Officer, Bacheli
- 3. Shri Bhanu Shankar Kashyap, Deputy Range Officer, Bacheli,
- 4. Shri Rajesh Karma, Forest Beat Officer, Bacheli

#### OfficialsfromtheUser Agency:

- 1. Shri Padmanabh Naik, Chief General Manager and CEO, NMDC-CMDC Ltd
- 2. ShriRavi Mohan Agrawal, AGM (Mining)
- 3. ShriG Venkateshwarlu, AGM (Survey)

As the proposal is a mining-related project and as per the provision of sub-rule10 (2) and (4) of the VSS Rules, 2023, the under-signed carried out inspection of the project site proposed for diversion on 06.12.2024& 07.12.2024. The CA lands proposed for this project are located in northern part of Chhattisgarh and were inspected by the Technical Officer, RO, Nagpur on 15/12/2024.

#### (I) Brief note on the project:

The project has been initiated by M/s NMDC-CMDCLimited to seek approval under Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. The project involves a diversion of 682.2722 Ha. forest land under Section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for mining/excavation and mineral processing of Iron ore from Bailadila Iron Ore Deposit-04, Range-Baçheli of District Dantewada in the State of Chhattisgarh. As per the Divisional Forest Officer, Dantewada Forest Division, Dist: Dantewada, Chhattisgarh, the Utility of the project is for the mining of iron ore proposed in the above area allotted to M/s NMDC-CMDC Limited based on the LOI issued by the Government of Chhattisgarh. The iron Ore production from Bailadila Deposit-4 will also meet the growing demand for iron orein the state/country for Steel/pellet production. The capacity of the Deposit-4 mine will be 7.00 MTPA.

The total forest land inside the Mining Lease (ML) area is 570.10 Ha, and there is no non-forest land inside the mining lease. The total area required for setting up infrastructure facilities outside the Mining lease (OML) is 122.5428 Ha The infrastructure facilities coming up in the forest land

extend over a forest area of 112.1722 Ha, and in revenue land, it is 10.3706Ha

Land Description	Inside Mining Lease	Outside Mining Lease
Total Forest Land (Ha)	570.1	112.1722
Non-Forest Land (Ha)	0	10.3706

#### (II) Justification for selection of the proposed site:

With regard to the justification of the proposed forest area for the project, the User Agency informed that, since the ore body location is site-specific, hence, no alternative is admissible for the Mining of iron ore. Hence, the instant proposal is submitted under VSSA, 1980

With regard to the justification for the requirement of the Mineral processing Infrastructure Facilities Outside the Mining Lease (OML), the User Agency informed that the Bailadila Iron Ore Deposit-4 mine is a Green Field project and it is proposed to develop the Deposit-4 mine as a mechanized and standalone project. Hence, ancillary facilities such as a Screening cum Beneficiation Plant, Loading Plant, Railway siding, downhill conveyor, Water Pipeline, Pump house etc. are also required to be set up for the production and dispatch of iron ore from the mine.

The total area required for setting up infrastructure facilities Outside the Mining lease (OML) is 122.5428 Ha The infrastructure facilities coming up in the forest land extend over a forest area of 112.1722Ha and in revenue land it is 10.3706Ha

Hence, the User Agency has proposed for the diversion of 682.2722Ha Of forest land(570.100 Ha inside lease and 112.1722 Ha outside lease) for the development of Bailadila Iron-Ore Deposit-04 for Mining, Processing and Transportation of Iron Ore.

#### (III) Details of the forest are a proposed for diversion:

(a) Legal status of the forest land proposed for diversion: Reserved Forest and Revenue Forest

#### Details of Notified Forest Area Inside and Outside Mining Lease Area

SI. No	Forest Division	Range	Mining Block/Infrastructur e Facilities	Compartment No.	Protected/Reserve d Forest	Total Area (in Ha)
1	Dantewada	Bacheli	Mining Block	1832	Reserved Forest	9.0520
2	Dantewada	Bacheli	Mining Block	1833	Reserved Forest	104.3320
3	Dantewada	Bacheli	Mining Block	1886	Reserved Forest	45.2390
4	Dantewada	Bacheli	Mining Block	1885	Reserved Forest	160.8620
5	Dantewada	Bacheli	Mining Block	1834	Reserved Forest	115.7390
6	Dantewada	Bacheli	Mining Block	1842	Reserved Forest	31.1260
7	Dantewada	Bacheli	Mining Block	1841	Reserved Forest	103.2380
8	Dantewada	Bacheli	Mining Block	1826	Reserved Forest	0.5120
9	Dantewada	Bacheli	Roads	1822	Reserved Forest	0.9130
10	Dantewada	Bacheli	Roads	1824	Reserved Forest	9.5090
11	Dantewada	Bacheli	Roads	1825	Reserved Forest	11.8080
12	Dantewada	Bacheli	Roads	1826	Reserved Forest	5.2860

## **Details of Notified Forest Area Inside and Outside Mining Lease Area**

SI. No	Forest Division	Range	Mining Block/Infrastructur e Facilities	Compartment No.	Protected/Reserve d Forest	Total Area (in Ha)
13	Dantewada	Bacheli	Downhill Conveyor	1822	Reserved Forest	5.7140
14	Dantewada	Bacheli	Downhill Conveyor	1824	Reserved Forest	12.0060
15	Dantewada	Bacheli	Downhill Conveyor	1825	Reserved Forest	7.4680
16	Dantewada	Bacheli	Downhill Conveyor	1826	Reserved Forest	17.1650
17	Dantewada	Bacheli	Downhill Conveyor	1834	Reserved Forest	0.6470
18	Dantewada	Bacheli	Screening Plant	1824	Reserved Forest	18.2810
19	Dantewada	Bacheli	Loading Plant	1824	Reserved Forest	10.0830
20	Dantewada	Bacheli	Loading Plant	1811	Reserved Forest	0.1560
21	Dantewada	Bacheli	Railway Siding	1825	Reserved Forest	0.2260
22	Dantewada	Bacheli	Railway Siding	1824	Reserved Forest	0.7010
23	Dantewada	Bacheli	Railway Siding	1811	Reserved Forest	0.1140
	<b>Total Notified</b>	Forest Are		670.1770		

Details of Revenue Forest (ChoteJhad Ka Jungle (CJJ) + Bade Jhad Ka Jungle (BJJ)

24	Dantewada	Bacheli	Pumphouse	508	Bade Kameli	0.4000
25	Dantewada	Bacheli	Pipeline	83/1/Ka; 88/1	Bhansi	0.1653
26	Dantewada	Bacheli	Loading Plant and Railway Siding	1,3,7,9,13/1,13/2	Poro Kameli	11.5299
	Total Revenue	Forest Are	a in Hectares (B)			12.0952

### Total Forest Land A+B = 670.1770 + 12.0952 = 682.2722 Ha

### (b) Component-wise breakup of the forest area proposed for diversion

SI. No	Component	Forest Area (Ha)	Non-Forest Area (Ha)	Inside/Outside ML
1	Area under Mining (In-situ)	94.11	0	Inside
2	Area under Mining (Float Ore)	70.52	0	Inside
3	Overburden/Waste Dumping	74.07	0	Inside
4	Infrastructure (Crushing Plant, Workshop, Administrative Building, Roads etc.)	65.9	0	Inside
5	Explosive Magazine Area	15.37	0	Inside
6	Green belt- Safety Zone along the ML Boundary	8.488	0	Inside

SI. No	Component	Forest Area (Ha)	Non-Forest Area (Ha)	Inside/Outside ML
7	Area under Environmental Protection, improvement and EMP Works	241.642	0	Inside
8	Major part of the Downhill conveyor system including overhead electrical line & water pipeline	43	0	Outside
9	Screening Plant including all allied facilities	18.281	0	Outside
10	Loading Plant including all allied facilities	16.6496	3.4043	Outside
11	Railway siding	6.1603	6.3669	Outside
12	Existing roads widening/strengthening for two- way traffic and new approach roads to all the plants & transfer houses	27.516	0	Outside
13	Pump House	0.4	0	Outside
14	Pipeline	0.1653	0.5994	Outside
	Total Area (Ha)	682.2722	10.3706	

# (c) <u>Wildlife: Whether the Forest area proposed for diversion is important from wildlife point of view or not:</u>

The State Government has reported that the forest area proposed for diversion does not form part of any National Parks/Sanctuary. Further, as reported by DFO Dantewada that the Wildlife Management Plan has been prepared and approved by the Chief Wildlife Warden of Chhattisgarh State and the Wildlife Management Plan has been uploaded in Parivesh Portal.

#### (d) Vegetation:

The State Government has mentioned that 340330 trees are enumerated (by sampling method) in the forest area proposed for diversion. The predominant species are Terminalia Tomentosa, Pterocarpus marsupium, Adina cordifolia, Tectona grandis, and other miscellaneous species.

During the inspection, it was noted that the trees have been marked and also cross-verified a few enumerated trees and found to be correct as per the information provided in the enumerated list of trees.

#### (e) Effect of removal of trees on the general ecosystem in the area:

The proposed forest area for diversion has good vegetation. Considering the nature of the project and its components, Iron Ore in the Bailadila area is formed as a capping deposit above the top of the Hill Range and because of this reason, all Iron Ore Deposits in the Bailadila region lie beneath the Forest area.

It is noticed that close to 432.1422 Ha or 63 % of the total forest area (ML + OML) is proposed for mining and Infrastructure facilities. Out of which 238.7 Ha Forest area proposed for mining is to be developed over a period of project life (21 Years) in a phased manner, for which felling of trees in one go is not required. The balance forest area, which is 193.4422 Ha is proposed for Infrastructure facilities (mineral processing and Transportation of Iron ore) where tree felling will be done in the initial phase of the project (0-5 years).

It is obvious that the felling of trees will have an adverse impact on the ecosystem. However, the User Agency has proposed for Environmental Improvement activities in 241.642 Ha (Gap plantation and Soil, Water & Moisture Conservation measures) & 8.488 Ha as a safety zone with 7.5 meters width along the boundary of the mining lease, sothatthe adverse impact of the project on the ecosystem can be minimized.

After the end of the project life, as per the approved mining plan, approximately 293.071 Ha out of 319.97 Ha of disturbedforest area will be fully reclaimed. Hence, this shall ensure effective restoration of the said area by the User Agency.

On the recommendation of the Divisional Forest Officer (DFO) Dantewada division, the ICFRE, Dehradun has conducted a study to ascertain the safe distance of mining from the ecologically sensitive Tree Fern habitat (which lies inside the Mining Block but excluded from the diversion area), has recommended various measures for conservation of flora (including protection of Tree fern Habitat), and soil, water & moisture conservation.

Further, the User Agency may be insisted on raising the plantation wherever possible within the forest area proposed for other components (112.1722 Ha) like Infrastructure (mineral processing

and Transportation of Iron Ore) at the project cost.

# (f) <u>Details of any protected archaeological/heritage site/defence establishment or any</u> other important monument located in the area, if any:

Asreported, **no**protected archaeological/heritage site/defence establishmentor any other important monument islocated in the area.

## (g) <u>Comment as to the reasonability of the extent of the forest land proposed for</u> diversion:

The User Agency has proposed for diversion of 682.2722 Ha of forest land for mining and Infrastructure facilities.

Since the ore-body location is site-specific no alternative can be considered for the ML area of 570.100Ha Forest land.

In the balance area of 112.1722 Ha proposed for diversion, the user agency has examined the various alternatives for the location of mineral processing facilities and Transportation of Iron Ore.

The Bailadila Iron Ore Deposit-4 mine is a Greenfieldproject and it is proposed to develop the Deposit-4 mine as a mechanised and standalone project. Hence, ancillary facilities such as a downhill conveyor, Screening cum Beneficiation Plant, Loading Plant, Railway siding, Water pipeline, Pumphouse etc. are also required to be set up for the production and dispatch of iron ore from the mine.

Hence, allowing mining and infrastructure facilities in the 682.2722 Ha Forest land seems reasonable.

## (h) Whether any work in violation of the Act or guidelines issued underthe Act has been carried out

During the site visit, a built-up area (Road and downhill conveyor) was noticed inside the ML area of Deposit-04.

The user agency has informed that the said area belongs to the infrastructure for the downhill conveyor system of the Bailadila Iron Ore Deposit-5 of the NMDC Ltd. and the same was constructed before the year 1980. The user agency has also provided the Survey of India toposheet, sheet number E-44J2dated 1973, where the said road can be seen in existence.

As per the Forest Stock Map, these infrastructures are lying in the Forest Compartment No. 1842 of the Bailadila Reserve Forest, thus this area has been considered as Reserve Forest in the Forest diversion application. However, as per revenue records, the said infrastructure of the Bailadila Iron Ore Deposit-5 of the NMDC Ltd. falls in Khasra No. 1384 of the Tehsil – Bade Bacheli of the District – Dantewada, C.G. For reference, Copy of the Form P-II of the Khasra and Map of the said Khasra is submitted by the User Agencyto CG State Government in its reply to MoEF&CC EDS dated 07.03.2024.

(i) Whether the proposal involves rehabilitation of displaced persons. If yes, whether a rehabilitation plan has been prepared by the State Government or not. Details be furnished specifically if the rehabilitation plan would affect any other forest area by trans-locating outside in and around the said forest:

The user agency has informed that insidethe mining lease area (570.10 Ha) there is no displacement of families.

In the Outside Mining Lease (OML) area, there are two villages where around 25 families will be displaced, and the resettlement and rehabilitation plan has been prepared and submitted to the district administration and the approval of the same is under process.

#### (j) Reclamation Plan:

The user agency has informed that the forest area reclamation plan ispart of the Mining plan that has been approved by the Indian Bureau of Mines (IBM), Ministry of Mines, Govt. of India (GOI).

#### (IV) Compensatory afforestation:

The User Agency has identified 1366.598Haof Degraded Forest land in various forest compartments in the forest divisions of Janjgir-Champa (836.296 Ha) &Marwahi (530.302 Ha).

CA Land Proposed in Janigir Champa Division						
क्रमांक	वनमंडल	परिक्षेत्र	कक्ष क्रमांक	परिसर	रकबा (हे.में)	
1	जांजगीर–चाम्पा	बालौदा	PF 108	दहकोनी	32.000	
2	जांजगीर—चाम्पा	बालौदा	RF 102	दहकोनी	56.000	
3	जाजगीर–चाम्पा	वालौदा	RF 102	दहकोनी	10.000	
4	जांजगीर-चाम्पा	बालीदा	PF 99	पहरिया	20.000	
5	जांजगीर-चाम्पा	वालौदा	PF 98	पहरिया	10.000	
6	जांजगीर-चाम्पा	वालोदा	RF 74	वेलटुकरी	30.000	
7	जांजगीर–चाम्पा	बालौदा	RF 73	बेलटुकरी	30.000	
8	जांजगीर-चाम्पा	वालीदा	RF 75	गतवा	55.000	
9	जांजगीर-चाम्पा	बालीदा	RF 103	गतवा	30.000	
10	जांजगीर-चाम्पा	वालौदा	PF 92	गतवा	13.000	
11	जांजगीर-चाम्पा	बालीवा	RF 79	बुद्धना	32.000	
12	जांजगीर-चाम्पा	वालौदा	RF 79	बुदमा	15.000	
13	जांजगीर-चाम्पा	वालीदा	RF 80	बुढना	32.000	
14	जाजगीर-चाम्पा	बालोदा	RF 80	बुदना	30.000	
15	जांजगीर-चाम्पा	वालौदा	PF 81	बुढना	15.000	
16	जांजगीर—चाम्पा	बालौदा	RF 76	अगारखार	18.000	
17	जांजगीर-चाम्पा	बालीदा	RF 76	अंगारखार	10.000	
18	जांजगीर-चाम्पा	बालौदा	RF 77	अंगारखार	20.000	
19	जांजगीर-चाम्पा	वालीदा	RF 67A	डॉगीपेण्ड्री	24.000	
20	जांजगीर-चाम्पा	वालीदा	RF 67A	डॉगीपेण्ड्री	20.000	
21	जांजगीर-चाम्पा	वालौदा	PF 109	परसाही	25.000	
22	जांजगीर-चाम्पा	वालीदा	OA 146	अकलतरा	15.000	
23	जांजगीर-चाम्पा	वालीदा	OA 160	अमलीपाली	22.396	
24	जांजगीर–चाम्पा	बालौदा	OA 160	अमलीपाली	60.000	
25	जांजगीर-चाम्पा	वालौदा	OA 157	अमलीपाली	28.900	
26	जांजगीर-चाम्पा	वालौदा	PF 132	कटघरी	24.000	
27	जांजगीर-चाम्पा	सक्ती	RF 40	सोनगुडा	10.000	
28	जांजगीर-चाम्पा	बालीदा	RF 55	कुरमा	52.000	
29	जांजगीर-चाम्पा	बालीदा	RF 62	सरईताल	62.000	
30	जांजगीर-चाम्पा	वालौदा	RF 51	विरगहनी	35.000	

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क्रमांक	वनमंडल	परिक्षेत्र	कक्ष क्रमांक	परिसर	रकबा (हे.में)
		कुल रकबा (H	a)	1	836.296 Ha
	CA Land	l Propose	d in Marwal	i Division	
क्रमांक	वनमंडल	परिक्षेत्र	कक्ष क्रमांक	परिसर	रकबा (हे.में)
1	मरवाही	मरवाही	PF 2076	कटरा	50.000
2	मरवाही	मरवाही	PF 2063	चुवाबहरा	30.000
3	मरवाही	मरवाही	PF 1987	साल्हेकोटा	30.000
4	मरवाही	मरवाही	PF 1989	साल्हेकोटा	30.000
5	मरवाही	मरवाही	PF 1993	बरगवां	45.302
6	मरवाही	मरवाही	PF 1996	बरगवा	20.000
7	मरवाही	मरवाही	PF 2011	भाठाटिकरा	40.000
8	मरवाही	पेण्ड्रा	PF 2358	कोटमी	50.000
9	मरवाही	येण्ड्रा	PF 2315	देवरीखुर्द	45.000
10	मरवाही	पेण्ड्रा	PF 2318	अमारू	80.000
11	मरवाही	पेण्ड्रा	PF 2353	बसंतपुर	45.000
12	मरवाही	पेण्ड्रा	PF 2352	पेण्ड्रा	15.000
13	मरवाही	मरवाही	PF 1951	भस्कुरा	50.000
		कुल रकबा (H	a)		530.302 Ha

(a) Whether land for compensatory afforestation is free from encroachments/other encumbrances:

Yes

(b) Whether land for compensatory afforestation is important from Religious/Archaeological point of view:

NA

(k) <u>Detailed comments on whether there are any alternative routes/alignments for locating the project on the non-forest land:</u>

The user agency has examined the various alternatives for establishing mineral processing and transportation facilities in non-forest land, but due to the non-availability of non-forest land in the vicinity of the project area, the proposed facility locations seem reasonable.

(l) Whether land being diverted has any socio-cultural/religious value.:

NA

#### Specific comments

A. There is an existing tree fern area inside the mining lease which is a rare species and is important from the conservation point of view. However, the said tree fern area of 76.496 Ha has not been included in the forest diversion application and no non-forestry use has been planned in the tree fern area.

Additionally, the state forest department had undertaken the study of the "Bailadila Deposit-4 Mine of NMDC-CMDC Ltd. to ascertain the safe distance from the existing tree fern habitat for carrying out mining activities and infrastructure development", from the Indian Council of Forestry Research and Education, Dehradun.

The ICFRE in its report has recommended/advised various preventive measures/steps to be taken for the conservation of the tree fern area located inside the mining lease.

The salient recommendations of the ICFRE study report are as under: -

- During the mining operations when the workings will go deeper, the bottom benches will be formed below the bed of the Galli Nalla in the North and South Blocks. As per the conceptual mining plan, the Northern Block will be backfilled by the mine waste generated from the South Block, and the South Block will be reclaimed by forming a water reservoir. Moreover, the horizontal distance of the bottom benches formed in the north and south blocks will be at a distance of more than 332m and 251m respectively and there will be no adverse effect on the water regime and the tree fern habitat. However, the user agency has been advised to restrict the initial mining operations to at least 5m above the Galli Nalla bed across the strike of the deposit in the North Block. On reaching the Bench levels in the North Pit to the corresponding levels of the Galli Nalla, the impact of mining operations on Galli Nalla may be monitored periodically on various environmental parameters, particularly for seepage of water. Based on the results, further deepening of the mining activity may be planned.
- 2. No float ore mining shall be undertaken on the eastern slope of the western ridge of Deposit-4 / western slope of Galli Nalla.
- No loose stacking of minerals be made on the eastern slope of the western ridge of Deposit-4 / western slope of Galli Nalla.
- 4. The proposal has been made to dump mine waste for the first 3 years on the eastern slope of Deposit-4 as Dump No. 1. The proposal has to be revoked and no mine waste dumping should be done on the eastern slope of the western ridge.
- 5. The user agency should follow the recommended safe distance of 150 meters and 191 meters respectively towards the west and east of Galli Nalla bank for mining operations subject to the strict adherence to the implementation of environment protection measures suggested in Chapter 7 of the ICFRE Report.
- B. After examining the proposed activity under the project and cross-verified during the site inspection, it is opined that, as the User Agency has proposed the forest area for diversion, for mining

and transportation of Iron Ore, which will enable the user agency to achieve the production of 100 MTPA by year 2030 and is in-line with National Steel Policy-2017.

Hence, it is opined that the proposed area for diversion is site-specific for the project and the user agency has further informed that the project is conceptualized with environmentally friendly practices like the use of covered conveyor belts, dry disposal of tailings using filter press technology etc.,

(C.B. Tashildar)

AIGF(Central) RegionalOffice MoEF&CC,Nagpur

## Recommendations of the DDGF (Central) Regional Office, MoEF&CC, Nagpur

The proposal is recommended subject to the following:

- 1. The observations and recommendations made by the ICFRE shall be followed *in toto* with regard to the tree fern area.
- 2. Appropriate decision for pre-1980 structures as observed during the site inspection may be taken by the competent authority.

(Dr Senthil Kumar)
DDGF (Central)
RegionalOffice
MoEF&CC,Nagpur

### Annexure - I

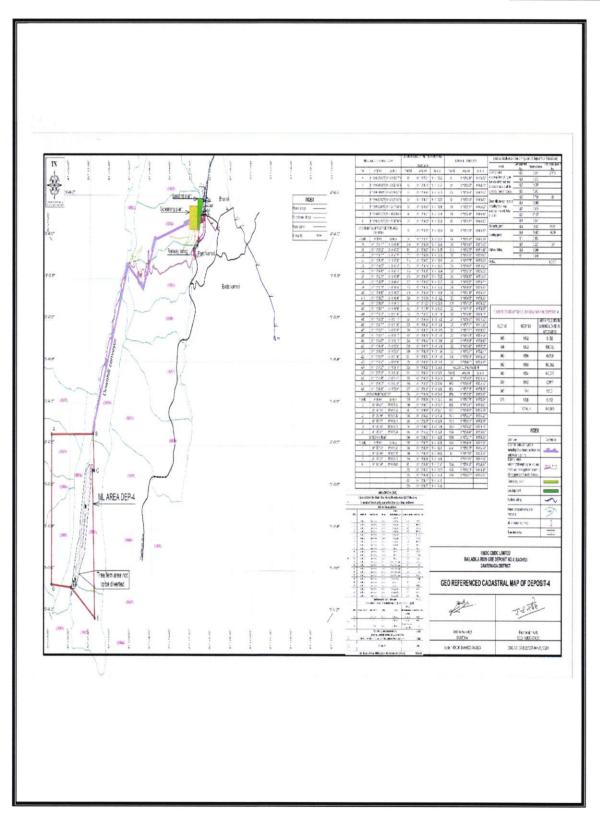


Fig: -1 Forest Stock Map

# Annexure – II

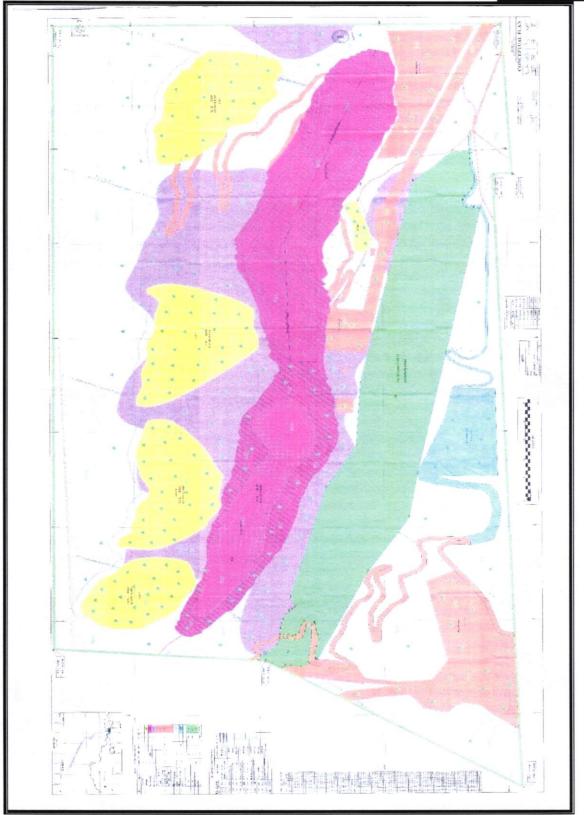


Fig: -2Conceptual Plan (Inside ML Area)

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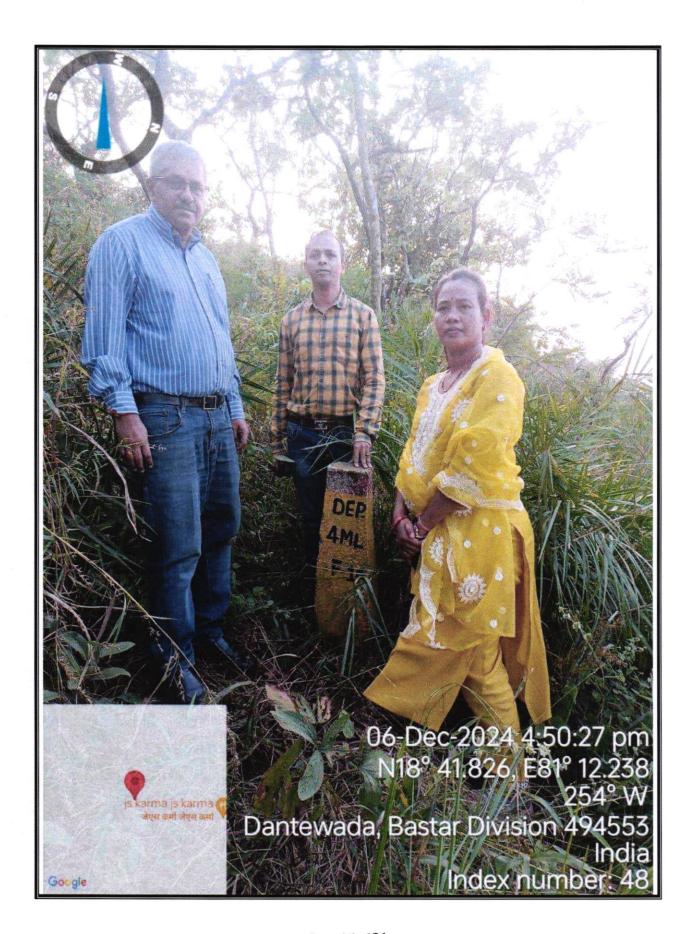
### Attachment:

(i) Fieldphotos

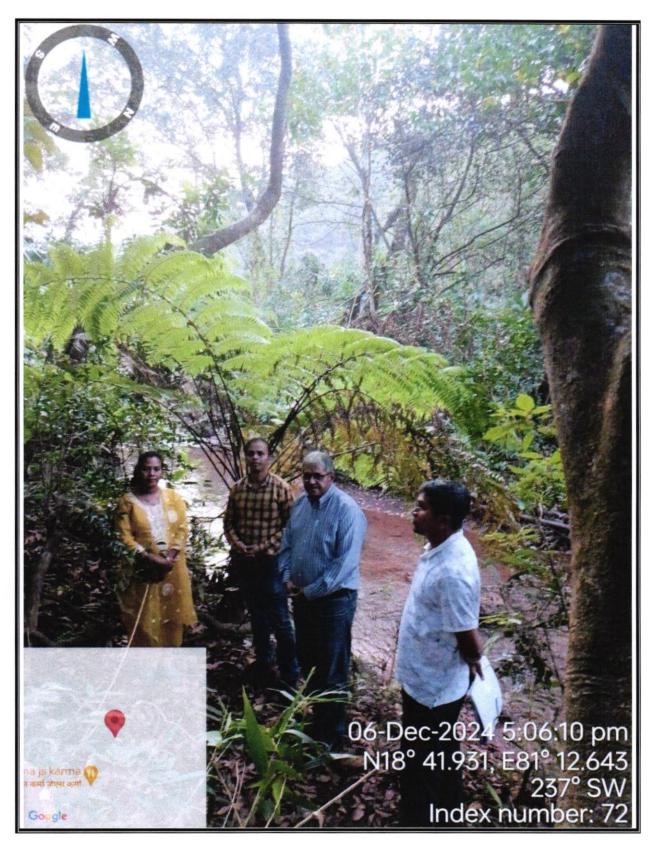




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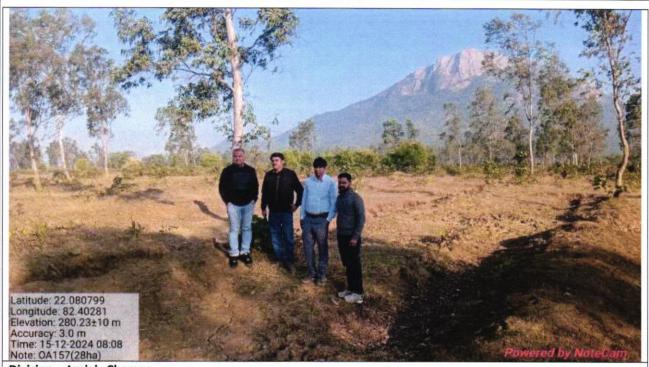
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Tree fern



Demarcation of the safety zone.



Division :- Janjgir-Champa

Range :- Baloda Village :- Amlipali Compartmen :- OA-157 Area Total:- 28.900 Ha.



Division :- Janjgir-Champa

Range :- Baloda Village :- Amlipali Compartmen :- OA-157 Area Total :- 28.900 Ha.



Division :- Janjgir-Champa

Range :- Baloda Village :- Amlipali Compartmen :- OA-160 Area Total :- 60.000 Ha.



Division :- Janjgir-Champa

Range :- Baloda Village :- Angarkhar Compartmen :- RF-77 Area Total :- 20.000 Ha.



Division :- Janjgir-Champa Range :- Baloda Village :- Angarkhar Compartmen :- RF-76 Area Total :- 28.000 Ha.



Division :- Janjgir-Champa

Range :- Baloda Village :- Budhna Compartmen :- RF-79 Area Total :- 47.000 Ha.



Division :- Marwahi Range :- Pendra Village :- Amaru

Compartmen :- PF-2318 Area Total :- 80.000 Ha.



Division :- Marwahi Range :- Marwahi Village :- Sakhekote Compartmen :- PF-1989 Area Total :- 30.000 Ha.