



Ref. No.: MCL/MLA/GM/E&F/2025-2026/ 319

Date: 11/07/2025

To,

The Divisional Forest Officer,  
Sundargarh Forest Division,  
District: Sundargarh, Odisha.

**Subject:** Proposal for non-forestry use of 227.62 ha of forest land within a total mining lease area of 323.92 ha within Basundhara (West) Extension Opencast Coal mining project by Mahanadi Coalfields Limited (MCL).

**Ref. No.:** 1) Letter dated 14.01.2025 of MoEF&CC, GoI (FC Division).

2) Memo No. 368/4F (Misc.) dated 18.01.2025 from your good offices.

Respected Sir,

With reference to the observations of the Assistant Inspector General of Forests regarding the proposal of Basundhara (West) Extension OCP of Mahalaxmi Area, MCL, I would humbly like to draw your attention to the following reply from our end:

1. An area of 16.439 ha of forest land has been proposed for infrastructure which is for non-site-specific activities. The State Govt. shall explore and shift the non-site-specific activities on non-forest land and submit comments in this regard.

*Received at  
SNG  
11/7/25*  
Reply: Basundhara (West) Extension OCP has a total mining lease area of 323.92 ha, out of which 227.62 ha is forest land, 45.01 ha is GNF land and 51.90 ha is Tenancy land. Moreover, the component wise break-up of the project area is as follows:

Table No. 1: Land use of Basundhara (West) Extension OCP, Mahalaxmi Area, MCL

Sl. No.	Component	Type of land (ha)			Total Area (ha)
		Forest	GNF	Tenancy	
1	Mining	206.014	44.573	49.644	300.231
2	Infrastructure	16.439	0.142	0.00 (Nil)	16.580
3	Safety zone	5.169	0.295	1.646	7.109

From the above table, it is evident that the entire GNF and tenancy land is involved in the mining component and safety zone component, thus, leaving no additional area to be included in the infrastructure component. Moreover, there is no external OB dump as well. Thus, this needs to be taken into account that



total emphasis has been given on mining component and safety zone component and thus, the infrastructure has to be constructed over bare minimum forest area as there is no alternative available. **The infrastructure that has been considered for this project is essential and has been limited to bare minimum so that the opencast mine could function smoothly.** The possibility of shifting the infrastructure was scrutinized from every possible point of view but there is no free Non-forest land in the nearest vicinity as Basundhara (West) Extension OCP is bound by Jamkani Reserve Forest in the North, Rampia block in the west, which is not a Coal India Limited block and thus no activity can be taken on this land, ongoing Basundhara (West) OCP in the east where active OB backfilling is being done as per mining plans of Siarmal OCP and Basundhara (West) OCP and Basundhara River in the south and Siarmal OCP beyond the river.

Thus, the area of infrastructure has been kept as bare minimum for construction of necessary infrastructure from techno-economic feasibility point of view. Thus, it is humbly requested to kindly accept the same as there is no free space available within the project and around the mines. Thus, 16.439 ha may be allowed to set up the necessary facilities which is 7.18 % of the total forest area involved.

2. **The proposal was accepted by the Nodal Officer in 2018 and now after lapsing of almost of 6 years it has been submitted to the Ministry for approval. The reasons with cogent and valid justification for submitting the proposal with such extraordinary delay shall be submitted.**

**Reply:** The identification of Compensatory afforestation land to the tune of 455.14 ha of degraded forest against 227.62 ha of forest land involved in Basundhara (West) Extension OCP was a tedious job as such a large amount of degraded forest was not available under Sundargarh Forest Division. Several divisions such as Kalahandi, Rourkela, Deogarh, Jharsuguda, Koraput, etc. were intimated regarding the identification of CA land but most of the divisions replied back that there was no such land available in such a huge volume. However, Koraput Forest Division had replied back that there was degraded land available but at different locations. Thus, the process of CA land identification, DGPS survey and pillar posting of 7 nos. of sites took a lot of time and there was such delay. However, the delay was totally unintentional and thus, the same may be accepted for further necessary action.

3. **As per the guidelines issued by the Ministry vide letter No. Fc-11/118/2021-FC dated 25.01.2024 the State Govt. shall complete the procedures laid down in the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980, the minutes of the meeting of Project Steering Committee (PSC), shall be attached with part-IV of forms and processing of proposals, through Conservator of Forests, for completing the procedural/technical purposes. The compliance in this regard is required.**

**Reply:** The Form A Part I was submitted online at Parivesh 1 portal on 20.09.2016. The proposal had been completed in all aspects and has been recommended by the DFO, SNG on 21.04.2024, recommended by RCCF Rourkela on 19.11.2024, recommended by PCCF BBSR on 06.12.2024 and recommended by



OSD cum Special Secretary to Government of Odisha on 17.12.2024. The site inspection has been completed by DIG, Forests, IRO, MoEF&CC, BBSR and the proposal has been recommended as well on 28.05.2025. As this proposal has been submitted prior to the commencement of Parivesh 2, the proposal may be considered and recommended to FAC for accordance of FC Stage I clearance.

Thus, as this proposal has been submitted prior to the commencement of Parivesh 2, i.e., in 2016 and since it has been recommended by the State Government and IRO, MoEF&CC, BBSR, this proposal may be considered for kind accordance of Stage I forest clearance.

4. The State Government has not uploaded CB analysis as per the guidelines and in prescribed format on Parivesh portal. The same needs to be uploaded, on Parivesh portal.

**Reply:** The CB analysis as per the guidelines and in prescribed format on Parivesh portal is attached herewith as "Annexure A" for your ready reference. However, the same needs to be uploaded by State Forest Department after due vetting.

5. The evacuation/transportation plan of the coal, along with provision of electricity transmission and water distribution shall be provided. If any additional forest area is required for the same then a comprehensive proposal shall be submitted.

**Reply:** The evacuation/transportation plan of the coal, along with provision of electricity transmission and water distribution will be managed within the acquired area. No additional forest area is required for the same.

6. Analysis of the area proposed for diversion and area proposed for CA area using DSS revealed the following:

- i. After the analysis of the KML file of the proposed forest land it has been observed that non-forestry work, solid structures, road and cultivation land is visible in the proposed forest patches. In this regard the comments of the State Government shall be provided along with action report as applicable.

**Reply:** As per OM No.11-599/2014-FC issued by MoEF&CC on 10.11.2015 (attached herewith as "Annexure B"), MoEF&CC has made it clear that "in case of mining leases having forest land in part or full, the concerned user agency may execute a single mining lease in accordance with the provisions of the Mine and Minerals (Development and Regulation) Act, 1957 and the Rules framed thereunder, for the entire area falling in the mining lease after final approval under Section-2 of the Forest (Conservation) Act, 1980 for the entire forest land falling in such mining lease is obtained."



Therefore, it can be easily inferred that the concerned user agency can only execute the mining lease of any project only after final approval under the Section-2 of the Forest Conversation Act, 1980.

Moreover, the afore-mentioned file of MoEF&CC further states that "the State Government, if so desires, may execute a separate mining lease for a whole or part of non-forest land falling in such mining lease, once stage-I approval under Section 2 of the Forest (Conservation) Act, 1980 for the entire forest land falling in such mining lease is obtained. The State Government, in such cases, shall take all measures to ensure that no violations of the Forest (Conservation) Act, 1980 occurs on the forest land."

Thus, the concerned user agency has no role to play in any unauthorized activity within the proposed forest patches.

- ii. It has been observed that Basundhara River flows along the eastern boundary of Basundhara (West) Extension mining lease and proposed patch no. A, B falls within its 100 m buffer. In this regard the no objection from concerned State Department (irrigation/water resources) shall be provided.

**Reply:** Basundhara River Management study has already been prepared considering all the projects and Basundhara River Management Study has already been prepared. The work of implementation of the plan has been undertaken by State Department (Water Resources/Irrigation) itself. Thus, the necessary documentation is attached herewith as "Annexure C" for your ready reference.

- iii. The land proposed for diversion is 227.62 ha however, as per DSS analysis the area is found 239.409 ha. Therefore, there is a discrepancy of 14.731 ha observed in the KML file of proposed forest patches. The State Govt. shall examine and submit the correct area details and correct KML file of the lease area.

**Reply:** ORSAC is responsible for verification and authentication of Forest Diversion Proposals (FDP) surveyed through DGPS/ETS by competent empaneled survey agencies on behalf of User Agency regarding "Submission of Geo-referenced Digital data while filing Forest Diversion Proposal for non-forest use" under Forest Conservation Act, 1980 as required by the Govt. of India, Ministry of Forest and Environment vide their circular F. No.11-9/98 dated 08.07.2011.

Accordingly, the work regarding "the Geo-referencing provision of co-ordinates and DGPS survey of 227.62 ha of Forest land of Basundhara (West) Extension OCP" has been done by ORSAC and the DGPS surveyed maps have been submitted by ORSAC vide map no. 4335/1 dated 06.11.2024 along with the .shp and .kml files.

Thus, ORSAC was requested to provide clarification regarding discrepancy in area as pointed out by MoEF&CC, to which ORSAC vide letter No. ORSAC/PR/0242/2015-2025/2762(6) dated 10.07.2025 (attached herewith as "Annexure D" has stated the following which is self-explanatory:



"Area has been verified using ArcGIS software & observed that the area delineated in shape file as well as KML file are same. The KML file has been generated through ArcGIS software and there is no error in the same, the calculation sheet of which is enclosed. However, when the KML files are opened in Google Earth Pro through split multi geometry option for area calculation, Google Earth Pro has been taking into account the non-forest plots and computing the area of the entire polygon without excluding the small non-forest plots. Sometimes it encounters some issues as observed from the split apart multi geometry overview, the copy of which is also enclosed for reference."

Thus, this is a software error and the .kml file seems to be correct and may kindly be accepted for further consideration.

iv. Component wise KML file of Basundhara (West) Extension OCP is not available on Parivesh Portal. The State Govt. Shall submit KML files on Parivesh portal.

Reply: The component wise .kml file of Basundhara (West) Extension OCP is attached herewith in the form of a readable disc.

v. With regard to the proposed CA land, it has been observed that cultivation land, unmetalled road, man-made water body and some solid structures are visible. The State Government shall offer comments.

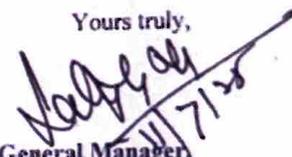
Reply: The entire CA land needed against diversion of 227.62 ha of forest land involved in the project is 455.24 ha. However, an area of additional 2.00 ha was taken into account while finalizing the CA land, thus, amounting to 457.22 ha. The additional land was taken into account after taking into account any encroachments that may be present which is less than 2.00 ha. The desired suitability certificate regarding the same is attached herewith as "Annexure E".

Therefore, in context of above, you are hereby humbly requested to kindly do the necessary regarding the proposal for non-forestry use of 227.62 ha of forest land within a total mining lease area of 323.92 ha within Basundhara (West) Extension Opencast Coal mining project by Mahanadi Coalfields Limited (MCL).

Your co-operation will be highly solicited from our end.

Thanking you.

Yours truly,

  
General Manager  
Mahalaxmi Area  
Mahanadi Coal Fields Limited

ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍  
महानदी कोलफील्ड्स लिमिटेड  
Mahanadi Coalfields Limited  
(A subsidiary of Coal India Limited)

Office of The General Manager,  
Mahalaxmi Area,  
AT/PO: Basundhara -770076  
District: Sundargarh (Odisha)



**MCL**

**Copy to:**

1. General Manager (E&F), MCL.



भारत सरकार / Government of India  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय / Ministry of Environment, Forest & Climate Change  
क्षेत्रीय कार्यालय, भुवनेश्वर / Regional Office, Bhubaneswar  
ए ३, चंद्रसेखरपुर / A/3, Chandrasekharpur  
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No.5-ORA 687/2016-BHU

28.05.2025

सेवा में,

अपर वन माहनिदेशक  
पर्यावरण, वन एवं जलवायु पारिवर्तन मंत्रालय,  
इंदिरा पर्यावरण भवन,  
जोरबाग रोड, अलीगंज,  
नई दिल्ली - 110003

विषय : Site inspection report in respect of proposal for diversion of 227.62 ha of forest land within mining lease area over 323.92 ha of Basundhara (West) Extension Open Cast Coal Block of Mahalaxmi area of M/s Mahanadi Coal field Limited in Sundargarh Forest Division of Sundargarh district under section-2 of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

संदर्भ: Ministry's letter datd 14.01.2025.

महाशय,

उपरोक्त विषय के संबंध में मुझे सूचित करने का निर्देश हुआ है कि यह परियोजना का दिनांक 25.03.2025 और 26.03.2025 को आधोहस्ताक्षरी द्वारा स्थल निरीक्षण किया गया । इस परियोजना से संबंधी स्थल निरीक्षण रिपोर्ट की एक प्रति आवश्यक कार्रवाई हेतु संलग्न कर भेज जा रहा है ।

संलग्न : उपरोक्त

भवदीय,

**पद्मा माहान्ती**

(डॉ पदमा माहान्ती)

उप वन महानिरीक्षक (केन्द्रीय)

**Recommendations for the proposed project site of Basundhara (West) Extension:**

1. Strict action needs to be initiated against erring officials of Revenue Department, being the custodian of the revenue forest land, for not being able to stop illegal mining in Revenue Forest land despite information by the DFO and RO on illegal mining (copy enclosed as Annexure-I).
2. **The exact area of on-going illegal mining needs to be calculated and penal NPV and penal CA as applicable, needs to be imposed on the State Government's Revenue Authority. Immediate steps need to be taken to stop illegal mining in the area.**
3. The Site Specific Wildlife Conservation Plan considering the importance of the area from wildlife point of view as mentioned in the Working Plan document and Soil & Moisture Conservation Plan as mandated in 1.22 (i) of the consolidated guidelines of the Adhiniyam which states that "2% of total project cost towards the cost of implementation of the Wildlife Management Plan and/or 0.5% of the project cost towards the cost of implementation of Soil and Moisture Conservation Plan, as the case may be, shall be charged from the user agency and deposited into the account of CAMPA and the same may be intimated to the MoEF&CC for the purpose of obtaining approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980" shall be prepared.
4. The Regional Wildlife Management Plan as per the approved norms of the State Govt. shall be prepared by the State Govt. at the cost of user agencies operating in that area with proportionate contributions from all the user agencies as being done in Bonai Forest Division in Sundargarh district & Keonjhar Forest Division and as per Ministry's conditions detailed in approvals of various mining projects. 5 mines of MCL are operating in the Sundargarh Forest Division along with 4 other mines of other user agencies. The Regional Wildlife Management Plan shall follow landscape level approach with special emphasis to mitigate adverse impact on wildlife present in the landscape with efficient mitigation measures.
5. The CA site should be made encroachment free, adequately fenced before taking up plantation by the State Forest Department. The justification from the State Govt. regarding the CA site selection may be furnished in accordance with the provisions mentioned in Chapter 2 point 2.1 and 2.2 (xiii) of consolidated guidelines of Adhiniyam.
6. Baseline survey of all ecological and hydrological factors needs to be carried out on the proposed site before carrying out the mining operation which will aid in planning the restoration strategy for the area both for progressive and final mine closure.
7. The standard conditions 2 (1) (ii) & (iii) pertaining to reclamation and restoration schedule and surrender of forest land for future management by State Forest Department should also hold good for the instant project proposal of Basundhara West extension of total 323.92 ha of which 223.92 ha is forest land. The 96.30 ha of non-forest land could be designated as "OECM" as per MoEF&CC guidelines, 2022 which would ensure the restoration of eco-system services in the mined out area once the minerals are mined out and mine is exhausted and closed.

**With these aforesaid conditions, the proposal is recommended.**

*Padma Mahanti*  
28/5/25  
(Dr. PADMA MAHANTI)  
DIGF (CENTRAL)

Encl: Annexures.

**COST BENEFIT ANALYSIS FOR DIVERSION OF FOREST LAND**

**Nature of proposal:** Diversion of **227.62 ha** of forest land within total mining lease area of 323.92 ha for Basundhara (West) Extension OCP of Mahalaxmi Area, MCL.

**Total no. of district through which proposed project road alignment traverse:** 01, Sundargarh.

**Total forest area proposed for diversion:** **227.62 ha** (Jamkani R.F.: **6.062 ha** and **221.558 ha** of revenue forest land.

**Purpose:** The cost benefit analysis is being undertaken for proposed diversion of forest land for diversion of **227.62 ha** of forest land within total mining lease area of **323.92 ha** for Basundhara (West) Extension OCP of Mahalaxmi Area, MCL.

**Table-A:** Cases under which a cost-benefit analysis for forest diversion is required.

Sl. No.	Nature of Proposal	Applicable / not applicable	Remarks
1	All categories of proposal involving forest land up to 20 ha in plains and up to 5 ha in hills	Not Applicable	These proposals may be considered on a case-to-case basis and value judgement.
2	Proposal for defence installation purpose and oil prospecting (prospecting only)	Not applicable	In view of national priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use.
3	Habitation, establishment of industrial units, tourist lodge complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of proposals would be rarely entertained.
4	All other proposal involving forest land more than 20 ha in plains and more than 5 ha in hills including roads, transmission lines, minor, medium, and	Applicable	These are cases where a cost benefit analysis is necessary to determine when diverting the forest

major irrigation projects, hydro projects, mining activity, railway line, location specific installations like microwave stations, auto repeater centres, TV towers etc.	land to non-forest use in the overall public interest.
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Since the proposal is for diversion of forest area measuring less than 20 ha in plains area, this cost-benefit analysis may be accepted on case-to-case basis.

**Table-B: Estimation of cost of forest diversion**

Sl. No.	Parameters	Given Guideline	Evaluation
1	Ecosystem services losses due to proposed forest diversion	<p>Economic value of loss of ecosystem services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by central government (MoEF&amp;CC).</p> <p>Note: In case of national parks, the NPV shall be 10 times the normal NPV and in case wildlife sanctuary the NPV shall be 5 times the normal NPV or otherwise prescribed by the ministry or any other competent authority.</p> <p>Note 1: Net present value (NPV) of environment and ecosystem services loss: - The concept of net present value of the forest land diverted is a scientific method of calculating the environmental cost and other losses caused due to diversion of forest land for non-</p>	<p><b>227.62 ha</b> of forest land, which is required for diversion consists of 6.062 ha of Jamkani R.F. (Eco-class-III having density of 0.6 (dense forest)) and 221.558 Ha of revenue forest land (eco class-III (tropical dry deciduous) forests having density 0.6 (dense forest). The <b>NPV @ Rs. 12,28,590.00/Ha</b> will be applicable as per MoEF&amp;CC circular no. 5-3/2011- FC (vol-I) dated 6th January 2022.</p> <p>So, NPV for <b>227.62 ha</b> of revenue forest land will be = Rs. 12,28,590.00 x 227.62 ha = Rs. 27,96,51,655.80 or <b>Rs. 2796.52 lakhs.</b></p>

		forestry.	
2	Loss of animal husbandry, productivity, including loss of fodder	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum.	Considering 10% of NPV it will be = Rs. 2796.52 lakhs (NPV) x 0.1 = <b>Rs. 279.66 lakhs.</b>
3	Cost of human resettlement	To be quantified and expressed in monetary terms on actual terms as per approved R&R plan.	The cost of tenancy land/Acre in monetary terms would be <b>Rs. 7143.00 lakhs</b> (As per EIA-EMP Report, relevant page attached herewith as <b>Annexure A).</b>
4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railway etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion.	The cost of GNF land/Acre in monetary terms would be <b>Rs. 10992.72 lakhs</b> (letter No. 521 dated 04.03.2020 of Tahsildar, Hemgir attached herewith as <b>Annexure B).</b>
5	Possession value of forest land diverted	30% of environmental cost (NPV) due to loss of forest or circle rate of adjoining area in the district should be added as a cost component as possession value of forestland whichever is maximum.  Note 2: possession value of forest land diverted: the forest land diverted for the project such as	Possession value of forest land will be (considering 30% of NPV) = 0.3 x Rs. <b>2796.52 lakhs= Rs. 838.95 lakhs.</b>

		<p>irrigation, hydropower, railways, roads, wind and transmission lines and mining etc are unlikely to be returned and remains in possession of the user agencies. Therefore 30% of the net present value (NPV) of forest land diverted or market rate of adjoining area in the district should be added as a cost component as "possession value of forest land" in addition to the environmental cost due to loss of forest.</p>	
6	Cost of suffering to oustees	<p>The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&amp;R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not been shifted.</p>	<p>316 families will be affected and considering that a family consists of at least one working person is employed for 313 days (365 days -52 Sundays), the average earning of each family is around Rs. 74181.00 per annum considering minimum wage of Rs. 237 per day (As per MGNREGA Wage Notification dated 24.03.2023 for the year 2023-2024) for 313 working days. The total earning of 316 PAFs will be Rs. 234.41 lakhs/ Year (316 x Rs 0.741 lakhs). The cost of rehabilitation is considered at 1.5 times of what the person should have earned in two years, have the family had not</p>

			been shifted. Therefore, the suffering of the families is estimated at Rs. 234.41 lakhs x 2 x 1.5= <b>Rs. 703.23 lakhs.</b>
7	Habitat fragmentation cost	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.	Habitat fragmentation cost is 50% of NPV that is Rs. 2796.52 x 0.5 = <b>Rs. 1398.26 lakhs.</b>
8	Compensatory afforestation and soil & moisture conservation cost.	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value.	As per CA scheme furnished by Koraput Forest Division, Odisha: <b>Rs. 4752.05 lakhs.</b>

**Table-C: Existing guideline for estimating benefit of forest diversion in CBA.**

Sl. No.	Parameter	Given Guideline	Evaluation
1	Increase in productivity attribute to the specific project.	To be quantified & expressed in monetary terms avoiding double counting.	The total productivity attribute in respect of Basundhara (West) Extension OCP is <b>Rs. 848.82 crores, i.e., Rs. 84882.00 lakhs.</b>
2	Benefits to economy due to specific project	The incremental economic benefits in monetary terms due to the activities attributed to the specific project.	Economic benefit in terms of increase in saving of vehicular operation and maintenance cost, better connectivity, minimal dust emission, lower traffic density, etc. are some of the exemplary criterions to judge.  In addition to that there are several other benefits that may

			accrue due to saving in fuel, reduction in carbon emission and man animal conflict. However, they have not been quantified, as it will be a function of various govt. policy variables. Exact quantification of the value is not possible as it is time and policy dependent.
3	No of population benefited due to specific project.	As per the detailed project report.	The total amount of compensation to be paid towards the villagers of Gopalpur is Rs. 33717.70 lakhs. The PAF list of Ratansara village has yet not been finalised. Thus, population benefited in terms of monetary benefits: <b>Rs. 33717.70 lakhs.</b>
4	Economic benefits due to of direct and indirect employment due to the project	As per the detailed project report.	Employment to approx. 1104 people will be provided. Thus, considering minimum wage of Rs. 237 per day (As per MGNREGA Wage Notification dated 24.03.2023 for the year 2023-2024) for 313 working days. The total earning of 1104 people will be <b>Rs. 818.96 lakhs</b> (1104 people x 313 days x Rs. 237/day).
5	Economic benefit due to compensatory afforestation.	Benefit from such compensatory afforestation accruing over next 50 years monetised and discounted to the present value should be included as benefits of	In lieu of total trees to be removed from the proposed project in reserve/protected forest land along the project road, it is proposed to undertake

		<p>compensatory afforestation.</p> <p>*For benefit of CA the guideline of the ministry for NPV estimation may be consulted.</p>	<p>compensatory plantation @ of twice the affected/diverted forest area as per Forest (Conservation) Act. So, the net productivity will increase.</p> <p>The compensatory afforestation will be taken up on about 457.220 Hectares of Degraded Forest land which is two times of the area proposed to be diverted.</p> <p>The compensatory afforestation will be done on 457.220 hectare of degraded forest land, would be having a density of minimum 0.7 as time progresses. The ecological value for a 50-year period for the density of 1.0 is INR 126.74 lakhs per hectare (As per Forest Conservation Act 1980). By considering minimum 0.7 density the ecological gain for this project would be INR <math>126.74 \times 0.7 \times 457.220 = \text{Rs. } 40563.64 \text{ lakhs.}</math></p>
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### Summary of cost benefit analysis for the project.

SL. No.	Total cost / Loss (in Lakhs)	Benefit (in Lakhs)
1	Ecosystem services losses <b>Rs. 2796.52 lakhs</b>	Increase in productivity attribute to the specific project.: <b>Rs. 84882.00 lakhs</b>
2	Loss of animal husbandry productivity, including loss of fodder = <b>Rs. 279.66 lakhs.</b>	Benefits to economy due to specific project: Exact quantification of the value is

		not possible as it is time and policy dependent.
3.	Cost of human settlement: Rs. <b>7143.00 lakhs</b>	No of population benefited due to specific project.: <b>Rs. 33717.70 lakhs</b>
4.	Loss of public facilities = Rs. <b>10992.72 lakhs</b>	Economic benefits due to of direct and indirect employment due to the project: <b>Rs. 818.96 lakhs</b>
5	Possession value, of forest land diverted = Rs. <b>838.95 lakhs</b>	Economic benefit due to compensatory afforestation.: <b>Rs. 40563.64 lakhs</b>
6	Cost of sufferings to Land outsees: <b>Rs.703.23 lakhs</b>	-
7	Habitat fragmentation cost = Rs. <b>1398.26 lakhs</b>	-
8	Compensatory afforestation and soil & moisture conservation cost = Rs. <b>4752.05 lakhs</b>	-
	Total Cost/Loss = <b>Rs 28904.39 lakhs</b>	Total gain/benefit from the project = <b>Rs. 159982.30 lakhs</b>

**The cost benefit ratio will be,**

Total Benefit/Total Cost:  $159982.30/28904.39 = 5.53$  which is  $>1$ , and **found viable** based on the given/above-described criteria.

*Sujay Das*  
28-1-24  
Project Officer, Project Officer, OCP  
परियोजना अधिकारी, बसुंधरा (प) ओसीपी  
Basundhara (West) OCP,

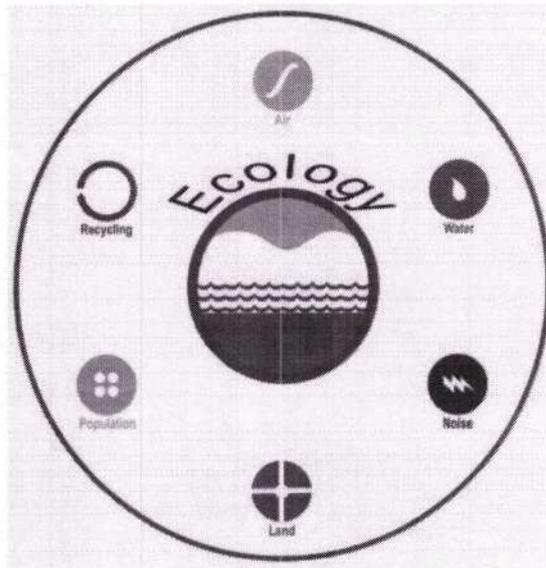
Mahalaxmi Area, MCL.  
*Sujay Das.*

*Sujay Das*  
30/03/24  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

CMPDI/FINAL-EIA/MCL/2019-20/Sept-19/79/01

**ENVIRONMENTAL IMPACT ASSESSMENT  
&  
ENVIRONMENT MANAGEMENT PLAN  
FOR  
BASUNDHARA (WEST) EXTENSION OCP  
(CAPACITY 8.75 MTY)**

**BASUNDHARA AREA  
IB VALLEY COALFIELD  
MAHANADI COALFIELDS LIMITED**



**SEPTEMBER 2019**



**Central Mine Planning & Design Institute Limited**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O: RRL, Bhubaneswar-751013 (Odisha)**

Certificate of accreditation vide No. NABET/EIA/1720/ RA 0092 valid till 01.10.2020

## Chapter – 9

**ENVIRONMENTAL ECONOMICS****9.1 INTRODUCTION**

The cost estimate for EIA-EMP of this project is given below along with the break-up:

Sl. No.	Particulars	Capital investment (Departmental) (Rs.lakh)
1.	Resettlement & rehabilitation cost	7143.00
2.	ETP & STP	12.99
3.	Garland drain	358.13
4.	Compensatory afforestation cost	1778.80
5.	Scientific studies	15.00
6.	Rain water harvesting	25.00
7.	Environment Data generation	5.00
	<b>Total :</b>	<b>9337.92</b>

**9.2 EXPENDITURE TO BE INCURRED TOWARDS CSR**

Estimated CSR cost - Rs.1854.6 Lakhs @ Rs.2/te of coal produced.  
(Revenue Expenditure)

However, fund for CSR will be allocated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher.

**9.3 COMPENSATORY AFFORESTATION AND WILD LIFE MANAGEMENT COST**

Out of the proposed mining lease area of 323.92 Ha, forest land is 227.62 Ha. An amount of Rs. 1778.80 Lakh has been provided for Compensatory Afforestation cost.

As per guideline, Govt. of Orissa, Forest & Environment Dept. Vide letter No.10F (Cons.) 6/2013-20693/F&E dated 05-10-13 have issued instruction to release @ Rs.43000/- per Ha of mining lease area basis towards the cost of wild life

# ଓଡ଼ିଶା କାର୍ଯ୍ୟାଳୟ: ହେମଗିର



Tahasil Office Hemgir,  
Phone No.06621-287124  
Email: tah.hemgiri-od@nic.in

## TAHASIL OFFICE: HEMGIR

LETTER NO. 521 /DATE 04/03/2020

To

The General Manager,  
Mahalaxmi Area, MCL,  
Dt. Sundargarh

Sub:

Regarding payment of Govt. Non-Forest land for up-coming project i.e. Siarmal OCP & Basundhara (West) Extension OC Project of Mahalaxmi Area, Mahanadi Coalfields Limited.

Ref:

Your Letter No: MCL/MLA/GM/2019-20/81 dtd. 20.12.2019

Sir,

With reference to the subject cited above, I am to intimate you that, Collector Sundargarh has been pleased to approve the proposal for payment of land premium & other Govt. dues on account of Ac. 1091.82 of Govt. Non-Forest land for Siarmal OCP & Basundhara(West) Extn. OCP of Mahalaxmi Area under Mahanadi Coalfields limited.

Collector Sundargarh has pleased to sanction the proposal on account of payment of the following Govt. dues which is as follows :

CALCULATION OF PREMIUM OF GOVT. NON FOREST LAND FOR SIARMAL & BASUNDHARA(W) EXTN. OCP.

Sl. No.	Village	Govt. land acquired in [Ac.]	Already Paid Area in Ac.	Balance Area to be paid in (Ac.)	Highest Rate of the land of the village in (Rs.)	Premium	Rent @2% of Premium	Cess @75% of Rent	Incidental Charges @10% of premium	Total Amount
1	2	3	4	5	6	7	8	9	10	11
1	Gopalpur	391.84	18.89	372.95	1700000.00	634015000.00	63401500.00	4755112.50	63401500.00	708511762.50
2	Tumulia	196.45	2.33	194.12	350000.00	106766000.00	10676600.00	800745.00	10676600.00	119313005.00
3	Siarmal	105.98	88.44	17.14	800000.00	13712000.00	1371200.00	102840.00	1371200.00	15123160.00
4	Ratanara	134.49	0	134.49	2600000.00	349674000.00	34967400.00	2622555.00	34967400.00	39076695.00
5	Bhupruna	373.12	0	373.12	1468000.00	547740160.00	54774016.00	4108051.20	54774016.00	612099628.80
	<b>TOTAL</b>	<b>1201.88</b>	<b>109.66</b>	<b>1091.82</b>						<b>1846006251.30</b>

( Rounded up to Rs. 184,60,06,252.00)

(Rupees One Hundred Eighty four Crore Sixty lakhs Six thousand Two hundred Fifty two only)

Hence, you are directed to take necessary action for early payment of the land premium and other Govt. dues on account of 1,091.82 Ac. of Govt. Non-Forest land coming under the Siarmal OC Project & Basundhara (West) OC Project of Mahalaxmi Area, Mahanadi Coalfields Limited.

Yours faithfully

*[Signature]*  
Tahasildar, Hemgir.

Memo No. 521 Dated 04/03/2020  
Copy submitted to the Addl. Dist Magistrate for favour of kind information.

*[Signature]*  
Tahasildar, Hemgir



OFFICE OF THE COLLECTOR & DISTRICT MAGISTRATE, SUNDARGARH  
(Revenue Section)

No. 923 /Dt. 28.2.20

To  
The Tahasildar, Hemgir.

Sub: Regarding payment of premium of Govt Non-forest land for Siarmal OCP & Basundhara (West) Extn. OCP. Of Mahalaxmi Area, MCL.

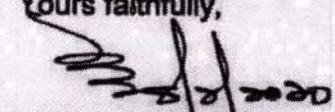
Madam,

With reference to the subject cited above, I am to say that Collector, Sundargarh has been pleased to approve the proposal for payment of premium for Ac. 1091.82 of Govt non-forest land by MCL pertaining to five villages.

It is therefore, requested to place the demand duly approved to the MCL for necessary payment at an early date.

Receipt of the proposal bearing No.1/2020 may please be acknowledged.

Yours faithfully,

  
Addl District Magistrate,  
Sundargarh

Serial number and date of order		Note of action taker on order with date
1	2	3

Perused the Order Dated. 05.02.2020 of Tehsildar, Hemgir and recommendation order dated 10.02.2020 of Sub-Collector, Sadar, Sundargarh and found that General Manager, MCL has acquired an area of Ac 1220.76 acres for Siarmal OCP and Basundhara (West) Extn OCP in the following villages which are as follows,

Sl No.	Name of village	Govt land acquired
1	Gopalpur	391.84
2	Tumlia	196.45
3	Siarmal	105.58
4	Ratansara	134.49
5	Jhupurunga	373.12
6	Kulda	19.28

As reported by the Tehsildar, Hemgir, the MCL has used the aforesaid govt land for the purpose of Coal Mining under CBA (A&D) Act 1957 since the date of Notification vide Order No. 2592 dtd. 13.09.1990 and 43015 dtd. 30.03.1993 u/s II(1).

The Tehsildar, Hemgir has indicated the highest rate after comparing Sale Statistics / Bench Mark Value of the adjoining village, the details of which is as follows.

Village	Kissam	Sale Statistics as per adjoining village (Rs)	BMV as per adjoining village (Rs)	Highest Rate (Rs)
Gopalpur	Goda-II	1100000.00	1200000.00	1200000.00
	Gharbari	1200000.00	1200000.00	1200000.00
	BaSa	880000.00	1060000.00	1060000.00
	MaSa	1700000.00	1200000.00	1700000.00
Ratansara	BeSa	1200000.00	1060000.00	1200000.00
	BeSa	1500000.00	1331000.00	1500000.00
	Goda-II	2600000.00	1350000.00	2600000.00
	MaSa	1350000.00	1350000.00	1350000.00
	Gharbari	1800000.00	1120000.00	1800000.00
	BaSa	2016700.00	1331000.00	2016700.00

**CONTINUATION OF ORDER SHEET**  
[ See paragraph 207 (1) of the Orissa Records Manual, 1964 ]  
Order and signature of officer

Serial number and date of order	1	2	3
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Jhupuranga	Goda-II	1331000.00	1465000.00	1465000.00
	Gharbari	1465000.00	1465000.00	1465000.00
	MaSa	1485000.00	1465000.00	1485000.00
	BaSa	1468000.00	1465000.00	1468000.00
	Goda-I	1468000.00	1465000.00	1468000.00
	BeSa	1340000.00	1465000.00	1465000.00
Siarmal	Goda-II		220000.00	220000.00
	MaSa	200000.00	220000.00	220000.00
	BeSa	800000.00	200000.00	800000.00
Tumulia	Goda-II	500000.00	550000.00	550000.00
	Gharbari		550000.00	550000.00
	BaSa		550000.00	550000.00
	Goda-I		550000.00	550000.00
	MaSa	500000.00	550000.00	550000.00
	BeSa	500000.00	550000.00	550000.00
Kulda	MaSa	200000.00	300000.00	300000.00
	BeSa	150000.00	146000.00	150000.00
	BaSa	200000.00	146000.00	200000.00
	Goda-II	300000.00	300000.00	300000.00

The General Manager, Maha Laxmi Area has requested to adjust an amount of Rs. 1, 40, 25,222.34 which has already been deposited towards premium for an area of Ac 130.11 out of total 1220.76. As reported by the Tehsildar, Hemgir, the MCL has deposited the amount for the purpose of Safety zone for other project and not for any mining activities.

Accordingly, the Tehsildar, Hemgir has calculated the Govt dues for Ac. 1091.82 pertaining to village Gopalpur, Tumulla, Siarmal, Ratansara and Jhupuranga basing on the highest rate of Sale Statistics / Bench Mark Value of the adjoining village, the details of which is as follows.

Serial number and date of order	Order and signature of officer	Note & action taken in order with date
1	2	3

CALCULATION OF DUES OF GOVT LAND ACQUIRED UNDER CB ACT BY MCL (TABLE-A)										
Sl No	Name of village	Govt land acquired in Ac.	Already paid area in Ac	Balance to be paid in Ac	Highest Rate of land of the village in Rs.	Premium	Rent @ 1% of Premium	Cess @ 75% of Rent	Incidental Charges @ 10 % of Premium	Total ( Col. No. 7+ No.8+ No.9+ No.10)
1	2	3	4	5	6	7	8	9	10	11
1	Gopalpur	391.84	18.89	372.95	1700000	634015000	6340150.00	4755112.50	63401500	708511762.50
2	Turnla	196.45	2.33	194.12	550000	106766000	1067660.00	800745.00	10676600	119311005.00
3	Starmai	105.58	88.44	17.14	800000	13712000	137120.00	102840.00	1371200	15323160.00
4	Ratansara	134.49	0.00	134.49	2600000	349674000	3496740.00	2622555.00	34967400	390760695.00
5	Jhupurunga	373.12	0.00	373.12	1468000	547740160	5477401.60	4108051.20	54774016	612099628.80
<b>TOTAL</b>		<b>1201.48</b>	<b>109.66</b>	<b>1091.82</b>	<b>7118000</b>	<b>1651907160.00</b>	<b>16519071.60</b>	<b>12389303.70</b>	<b>165190716.00</b>	<b>1846006251.30</b>

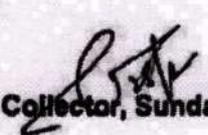
Or say Rs. 184,60,06,252.00

(Rupees One Hundred Eighty four Crore sixty lakhs six thousand two hundred fifty two)

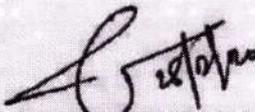
In the Kulda village MCL has paid land premium for Ac 20.45 against the acquired area of Ac 19.28. It needs further verification and subsequent reconciliation. Accordingly, the land of Kulda village is not taken into account. Accordingly premium previously received for Ac 109.66 is adjusted and MCL is liable for payment premium for Ac 1091.82 of land.

In view of the facts stated above the calculation made by the Tehsildar, Hemgir is hereby approved.

Dictated



Collector, Sundargarh



COLLECTOR, SUNDARGARH

**-: ORDER SHEET :-**

[See ORM 1964, Para 207(1)]

From : ..... To: .....

Tahasil - Hemgir, P.S -Hemgir, Village- Siarmal, Ratansara,  
Gopalpur, Jhupurunga, Kulda & Tumulia. District- Sundargarh,

Sub-Division - Sadar, Sundargarh, Misc. Case No.....01/2020.....

Nature of Case : - Regarding payment of Premium of Govt. Non-Forest Land for  
upcoming project i.e. Siarmal OCP & Basundhara(West) Extn. OCP.

Sl. No & Date of order	Order and Signature of order	Note of action taken in the order
1	2	3
07-01-2020	<p>This Case Record is taken up today on the basis of application filed by the General Manager, Mahalaxmi Area, MCL for operation of upcoming Project i.e. Siarmal OCP &amp; Basundhara(West) Extn. OCP with an area of 1220.76 acres of Govt Non-forest land in six villages i.e. Siarmal, Kulda, Gopalpur(P), Ratansara(P), Jhupurunga &amp; Tumula. The details of land plan is attached in the Case Record. Now, General Manager, Mahalaxmi Area, MCL is requested for payment of land premium and other Govt. dues.</p> <p>All the aforementioned villages are coming under Notified and Acquired under CBA(A&amp;D) Act 1957 &amp; Notified vide S.O. No. 2592, dtd.13.09.1990 and S.O. No.43015, dtd.30.03.1993 Under Section -II(I) for Coal Mining purpose by MCL.</p> <p>The Land Plan has been verified by Record keeper and found correct. Hence, to evaluate the land premium of the aforementioned land Sub-Registrar, Hemgir, may be requested for Bench Mark Valuation of the land as well as Sale Statistics report of the village alongwith the adjoining village i.e. Ghogarpali, Podajalanga, Balbaspur, Gaddwar, Sahaspur, Sarangijaria, Kaletpani &amp; Kuisira.</p> <p style="text-align: right;"><i>[Signature]</i> 21/1/2020 Tahasilidar, Hemgir.</p>	

**Continuation Order Sheet**

(See Paragraph 207(1) of Orissa Record Manual, 1964)

Sl. No & Date	Order of the Office				Note of action taken on order with date
52-20	<p>The Bench Mark Valuation alongwith sale statistic report has been received from Sub Registrar, Hemgir vide letter No. 22, dtd.10.01.2020 which is tagged in the Case Record. Pursued the Bench Mark Valuation and Sale Statistic report. It is ascertained from the report that no sale transaction has been occurred in the aforementioned village since from the date of Notification. To evaluate the actual land value, the Sale Statistics report of the adjoining village may be taken into consideration. The details of kism wise land value in shape of Bench Mark Valuation &amp; Sale Statistic report are as under:-</p>				
	Village	Kissam	Sale Statistics as per adjoining village (Rs.)	BMV as per adjoining village (Rs.)	Highest Rate (Rs.)
	Gopalpur	Goda-II	1100000.00	1200000.00	1200000.00
		Gharbari	1200000.00	1200000.00	1200000.00
		Ba.Sa	880000.00	1060000.00	1060000.00
		Ma.Sa	1700000.00	1200000.00	1700000.00
		Be.Sa	1200000.00	1060000.00	1200000.00
	Ratansara	Be.Sa	1500000.00	1331000.00	1500000.00
		Goda-II	2600000.00	1350000.00	2600000.00
		Ma.Sa	1350000.00	1350000.00	1350000.00
		Gharbari	1800000.00	1120000.00	1800000.00
		Ba.Sa	2016700.00	1331000.00	2016700.00
	Jhupurunga	Goda-II	1331000.00	1465000.00	1465000.00
		Gharbari	1465000.00	1465000.00	1465000.00
		Ma.Sa	1465000.00	1465000.00	1465000.00
		Ba.Sa	1468000.00	1465000.00	1468000.00
		Goda-I	1468000.00	1465000.00	1468000.00
		Be.Sa	1340000.00	1465000.00	1465000.00
	Siarmal	Goda-II		220000.00	220000.00
		Ma.Sa	200000.00	220000.00	220000.00
		Be.Sa	800000.00	200000.00	800000.00
	Tumulia	Goda-II	500000.00	550000.00	550000.00
		Gharbari		550000.00	550000.00
		Ba.Sa		550000.00	550000.00
		Goda-I		550000.00	550000.00
		Ma.Sa	500000.00	550000.00	550000.00
		Be.Sa	500000.00	550000.00	550000.00

## CONTINUATION OF ORDER SHEET

[ See paragraph 207 (1) of the Orissa Records Manual, 1984 ]

Serial number and date of order	Order and signature of officer	Note of action taken on order with date
1	2	3

Serial number and date of order	Order and signature of officer	Note of action taken on order with date			
1	2	3			
	Kulda	MaSa	200000.00	300000.00	300000.00
		BeSa	150000.00	146000.00	150000.00
		BaSa	200000.00	146000.00	200000.00
		Goda-II	300000.00	300000.00	300000.00

As per discussion made with the Additional District Magistrate, Sundargarh on 15.01.2020 the Govt. dues. was calculated on the basis of highest rate of BMV/ Sale Statistics report of the concerned village as well as from, the adjoining village where no transaction has been made. The details of calculation is as follows: The Govt land measuring Ac. 1220.76 dec has been acquired by the MCL under Coal Bearing Act since 1990

Further the General Manager, Mahalaxmi Area has reported that they have deposited land premium amounting to Rs. 1,40,25,222.34 (Rupees One Crore Forty Lakhs Twenty-Five Thousand Two Hundred Twenty-Two and Thirty-Four Paise) only of Ac. 130.11 dec., out of the total area Ac. 1220.76 dec. At present General Manager, Mahalaxmi Area has requested to adjust the amount previously paid in other Project, for the purpose of Safety Zone of other project and not for any mining activities. Hence payment of premium for Ac 130.11 of land which MCL said to have deposited may be considered after final verification of releavant document. The MCL may be placed demands for Ac 1090.65 of land which is as follows.

CALCULATION OF DUES OF GOVT LAND ACQUIRED UNDER CB ACT BY MCL (TABLE-A)										
Sl NO	Name of village	Govt land acquired In Ac.	Already paid area In Ac	Balance to be paid In Ac	Highest Rate of land of the village in Rs.	Premium	Rent @ 1% of Premium	Cess @ 73% of Rent	Incidental Charges @ 10 % of Premium	Total ( Col. No. 7+ No.8+ No.9+ No.10)
1	2	3	4	5	6	7	8	9	10	11
1	Gopalpur	391.84	18.89	372.95	1700000	634015000	6340150.00	4755112.50	63401300	708511762.50
2	Tumla	196.45	2.33	194.12	550000	106766000	1067660.00	800745.00	10676600	119313005.00
3	Sarmal	105.58	88.44	17.14	800000	13712000	137120.00	102840.00	1371200	15323180.00
4	Ratansara	134.49	0.00	134.49	2600000	349674000	3496740.00	2622555.00	34967400	390780685.00
5	Jhupurunga	373.12	0.00	373.12	1468000	547740160	5477401.60	4108051.20	54774016	612098628.80
6	Kulda	19.28	20.45	0.00	300000	0.00	0.00	0.00	0.00	0.00
	TOTAL	1220.76	130.11	1090.65	7418000	1651907160.00	16519071.60	12389303.70	165190716.00	1846006252.30

(Or Say = Rs 184,60,06,252.00)

After calculation, the total amount comes to Rs 184,60,06,252.00 (Rupees One Hundred Eighty four Crore sixty lakhs six thousand two hundred fifty two) only.

The Case Record is submitted before the Competent Authority i.e. District Magistrate and Collector, Sundargarh for kind approval through Additional District Magistrate, Sundargarh.

Dictated

W  
5/2/20  
Tahasildar, Hemgir

Dictated and Corrected by me

W  
5/2/20  
Tahasildar, Hemgir

F. No. 11-599/ 2014-FC  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Forest Conservation Division)

Indira Paryavaran Bhawan  
Aliganj, Jorbagh Road  
New Delhi - 110 003  
Dated: 10<sup>th</sup> November, 2015

To

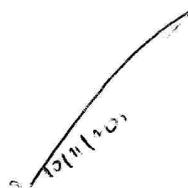
**The Principal Secretary (Forests)**  
All State Governments / Union territory Administrations

**Sub:** Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act 1980- Submission of proposals to obtain approval for diversion of entire forest land located within a mining lease.

Sir,

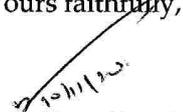
I am directed to refer to para 4.4 of the consolidated guidelines under the Forest (Conservation) Act, 1980 issued by this Ministry which *inter-alia* provides that if a project involves forest as well as non-forest land, work should not be started on non-forest land till approval of the Central Government for release of forest land under the afore-mentioned Act has been given, and to say that this Ministry has received representation to appropriately amend the said guidelines to permit commencement of mining in non-forest areas in the coal blocks having both forest and non-forest land.

After careful examination of the matter in this Ministry and in partial modification of the said para 4.4 of the consolidated guidelines under the Forest (Conservation) Act, 1980 and the guidelines issued by this Ministry vide letter of even number dated 1<sup>st</sup> April 2014 on the above-mentioned subject, I am directed to say that in case of mining leases having forest land in part or in full, the concerned user agency may execute a single mining lease in accordance with the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 and the Rules framed thereunder, for the entire area falling in the mining lease after final approval under Section-2 of the Forest (Conservation) Act, 1980 for the entire forest land falling in such mining lease is obtained. However, the State Government, if so desires, may execute a separate mining lease for a whole or part of non-forest land falling in such mining lease, once stage-I approval under Section 2 of the Forest (Conservation) Act, 1980 for the entire forest land falling in such mining lease is obtained. The State



Government, in such cases, shall take all measures to ensure that no violations of the Forest (Conservation) Act, 1980 occurs on the forest land.

Yours faithfully,

  
(H.C. Chaudhary)  
Director

**Copy to:-**

1. Prime Minister's Office (*Kind attn.:* Shri Santosh D. Vaidya, Director).
2. Secretary (Coordination), Cabinet Secretariat.
3. Secretary, Ministry of Mines, Government of India.
4. Secretary, Ministry of Coal, Government of India.
5. Secretary, Ministry of Steel, Government of India.
6. Principal Chief Conservator of Forests, all States/UTs.
7. Nodal Officer, the Forest (Conservation) Act, 1980, all States/UTs.
8. All Regional Offices, Ministry of Environment, Forest and Climate Change (MoEFCC).
9. Joint Secretary, In-charge, Impact Assessment Division, MoEF.
10. PS to the Hon'ble Minister of State (Independent Charge) for Environment, Forest and Climate Change.
11. Chairman, State Environment Impact Assessment Authority, all States/UTs.
12. Member-Secretary, State Environment Impact Assessment Authority, all States/UTs.
13. All Directors/ Assistant Inspector General of Forests in Forest Conservation Division, MoEFCC.
14. All Advisors/ Directors/ Dy. Directors in the Impact Assessment Division, MoEFCC.
15. Director, Regional Office (Headquarters), MoEFCC. .
16. Sr. Director (Technical), NIC, MoEFCC with a request to place a copy of this letter on website of this Ministry.
17. Sr. PPS to the Secretary, Ministry of Environment, Forest and Climate Change.
18. Sr. PPS to Director General of Forests and Special Secretary, Ministry of Environment, Forest and Climate Change.
19. Sr. PPS to Addl. Director General of Forests (Forest Conservation), Ministry of Environment, Forest and Climate Change
20. Sr. PPS to Inspector General of Forests (Forest Conservation), Ministry of Environment, Forest and Climate Change.
21. Guard File.

  
(H.C. Chaudhary)  
Director



28

**Office of the Chief Engineer (Planning)**  
**Secha Sadan, Bhubaneswar, Odisha**  
**Email- wrceppf@gmail.com**



CE (P) WPP -43/2022 / ... 2406 ..... Date- 26.08.2022

From

Er. Sagar Mohanty  
 Chief Engineer, Planning,

To

The Engineer-in Chief, Water Resources  
 Secha Sadan, Bhubaneswar.

Sub: Submission of study report by M/s Mahanadi Coalfields Limited to develop an integrated approach for the protection of Basundhara River from the proposed mining area.

Ref: 1.Letter no. MCL/GM/MLA/2022/192 dated 12.03.2022 to EIC, WR from GM, MCL  
 2.Letter no. 18407 dated 21.07.2022 from EIC, WR to CE, Planning (forwarded 1)  
 3.Letter no. WG-MCL-3/21-20905 dated 20.08.2022 from EIC, WR to CE, Planning.  
 4.DoWR Memo No - 21690/ WR dtd. 20.08.2022.

Sir,

In inviting a kind reference to the above noted subject, it is to state that after being receiving letter from DoWR, Engineer-in-Chief, Water Resources has requested this office to examine the study reports on the above subject submitted by M/s Mahanadi Coalfields Limited.

According to condition No. 5 of Para-A of Forest Advisory Committee of MoEF&CC :-

“Chattajor nallah located in the area has been proposed to be straightened by the user agency. Also a number of mines are operational in the area which may be cause threat to hydrological regime viz., Basundhara River and its rivulets, therefore, considered opinion of Water Resources Department of the State on the proposed straightening of Chattajor nallah and proposed mitigating measures may be informed by the State. Further State Government may submit its plan and vision to develop an integrated approach for the protection of the Basundhara River from the proposed mining in the area”.

M/s Mahanadi Coalfields Limited has intimated vide letter No 192 dtd. 12.03.2022 that for compliance of the decision of the FAC, it is proposed by Siarmal OCP, Mahalaxmi Area, MCL to undertake the “Study of hydrological regime viz. Basundhara River due to proposed straightening of Chhatajor nallah for mining of coal in upcoming Siarmal OC Project of Mahanadi coalfields Limited in Sundergarh district, odisha and study of hydrological regime viz. Basundhara river and its rivulets due to upcoming Siarmal OC Project and other operational OC Projects in the area for submission of plan and vision to develop an integrated approach for the protection of the Basundhara river from the proposed mining in the area”.

But, M/s Mahanadi Coalfields Limited has reported vide Letter No 695 dtd. 16.08.2022 to DoWR that Chhatajor nallah located in the mining area will not be straightened by Siarmal Open Cast Coal Mining Project of M/s Mahanadi Coalfields Limited and the study of the hydrological regime has been undertaken towards the protection of the Basundhara river & its rivulets. After engaging the consultant, the details of study conducted by field surveys, plan and vision, the Agency submitted the study reports of Siarmal OCP, Mahalaxmi Area, MCL for considered opinion of Water Resources Department on the above study.

As per the letter under reference (1), Siarmal Open Cast Coal Mining Project (Siarmal OCP) of Mahanadi Coalfields Limited in Sundergarh District is an upcoming mining project. The proposal was deliberated in FAC of MoEF& CC, GoI on 21.02.2022. However, the proposal was deferred as the user agency proposed to straighten the Chhatajor Nalla located in the mining area. Since there are a number of mines operational in the area, FAC sought opinion of WRD of the State on the proposed straightening and proposed mitigation measures. For compliance to FAC, Siarmal OCP undertook the study. After carrying out the study, a report on "Basundhara River Management Plan" was communicated to this office vide letter under reference (3) for necessary views.

The following are the observation on the report "Basundhara River Management Plan".

1. The report was prepared considered five open cast coal mines-Siarmal, Basundhara (west) expansion, Basundhara(west) extension, Kulda and Garjanbahal spreading over an area of total 43.395 sqkm located adjacent to the Basundhara River and its tributaries (Chhatajor nallah and Chatudhara nallah).

From Google Imageries, it is observed that there are other coal mines (covering about 6 sqkm) which are operating inside the Basundhara Sub-Basin near Manoharpur in Hemgiri Block of Sundargarh district near Garianalla (tributary of Basundhara River at about 18 km downstream of the confluence of Chhatajhar nallah). The same along with other proposed (if any) should also be incorporated in the study.

2. Five aspects has been addressed in the report-
  - a. River drying due to diversion of surface water into the mine pits  
*[Mitigation Measures- Embankment strengthening with buffer zone between river and mine pits has been suggested.]*
  - b. Reduction of carrying capacity of the river due to deposition of overburden from mine pits into the river bed.  
*[Mitigation Measures- Embankment strengthening will stop coal dust/eroded soil entry.]*
  - c. Breaching of river embankments due to instability that might be caused of mine pits location in close proximity.  
*[Mitigation Measures- 3-5m high embankments with provision of Geo Mattress filled with sand and natural vegetation in the river side slope has been suggested.]*
  - d. Change of river course due to mine activity.  
*[Mitigation Measures- Embankment Strengthening and buffer zone with mines have been suggested.]*
  - e. Change of quality of river water due to mining activities.  
*[Mitigation Measures- For mine water, treatment plants will remove the objectionable material to conform to the standards of CPCB & OPCB. For storm water, garland drains, treatment plants and settling ponds have been suggested.]*

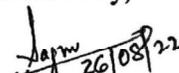
However, as mentioned in the letter under reference (1), no provision of river straightening has been addressed in the report as per FAC comments to condition no 5 of

Para-A. Instead, provision of river bank strengthening/stability study has been carried out in the report under which the impact of deep excavation on HGL line has been studied. A gradient of 4:1 for HGL line has been adopted and based on the depth of top soil at various bore holes, a minimum buffer zone of 25-55 m has been suggested at the periphery of mine pits located near river embankments.

3. From planning point of view the design flood assessed at various point for finalization of HFL has been verified. The adopted design flood discharges computed at various points are in order.
4. There are two ISS proposals and one barrage proposal located about 10-16 km downstream across Basundhara River for harnessing the surface water of the basin. The ISS proposals are primarily meant for meeting the domestic need of the surrounding region. Since, about 49.4 sq km of the catchment is under mining activity, it has to be strictly ensured that the water quality is maintained with the BIS Standards [IS 10500 (2012)] for not to adversely affect the purpose of ISS.
5. Ecological and environmental damages if any arises during and after strengthening & protection work of river/ nallah shall be the sole responsibility of M/s MCL for which they shall be treated as per law.

This is for your kind information and necessary action.

Yours Faithfully,

  
Chief Engineer, Planning

Memo No. 2407 /Date. 26.08.2022

Copy submitted to the Engineer-in-Chief (P&D), Odisha, Bhubaneswar for favour of kind information.

  
Chief Engineer, Planning



## ODISHA SPACE APPLICATIONS CENTRE (ORSAC)

Department of Science & Technology, Government of Odisha

No. ORSAC /PR/0242/2015-25/-----2762<sup>(6)</sup> Dt 10/7/2025

To

The General Manager,  
Office of the General Manager,  
Mahalaxmi Area,  
AT/PO: Basundhara-770076,  
Dist: Sundergarh, Odisha.

Sub: Clarification on discrepancy in KML file of the proposed forest patches.

Ref: Your letter Ref. No.: MCL/MLA/GM/2025-2026/304, dated 28.06.2025.

Sir,

In inviting reference to the letter and subject cited above, this is informed you that the above area has been verified using ArcGIS software & observed that the area delineated in shape file as well as KML file are same. The KML file has been generated through ArcGIS software and there is no error in the same, the calculation sheet of which is enclosed. However, when the KML files are opened in Google Earth Pro through split multi geometry option for area calculation, Google Earth Pro has been taking into account the non-forest plots and computing the area of the entire polygon without excluding the small non-forest plots. Sometimes it encounter some issues as observed from the split apart multi geometry overview, the copy of which is also enclosed for reference.

Thanking you,

Yours faithfully,

*RP*  
*10.7.25*  
SCIENTIST 'D'

Copy to:

- 1) The Additional Chief Secretary (Forest), Government of Odisha, Bhubaneswar for kind information.
- 2) The PCCF (HoFF), Department of Forests, Government of Odisha, Bhubaneswar for kind information.
- 3) Dy. DGF (Central), Regional Office of the MoEF&CC at Bhubaneswar for kind information.
- 4) Nodal Officer (FCA), Department of Forests, Government of Odisha, Bhubaneswar for kind information.
- 5) DFO, Sundergarh for kind information.

**COMPARISON STATUS OF SHAPE FILE AREA WITH GOOGLE EARTH AREA**

SL_NO	PATCH NO	SHAPEFILE AREA		GOOGLE EARTH AREA		FOREST TYPE
		AREA_HA	AREA_AC	AREA_HA	AREA_AC	
1	PATCH-A	17.997	44.472	17.997	44.472	REVENUE FOREST
2	PATCH-B	161.677	399.512	161.677	399.512	
3	PATCH-C	36.327	89.767	36.327	89.767	
4	PATCH-D	0.304	0.751	0.304	0.751	
5	PATCH-E	1.450	3.582	1.450	3.582	
6	PATCH-F	0.009	0.022	0.009	0.022	
7	PATCH-I	0.152	0.375	0.152	0.375	
8	PATCH-G	6.326	15.633	6.326	15.633	
9	PATCH-H	0.436	1.076	0.436	1.076	
<b>TOTAL AREA</b>		<b>224.678</b>	<b>555.190</b>	<b>224.678</b>	<b>555.190</b>	<b>RESERVE FOREST</b>



split apart multi geometry google earth

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To separate a multi-geometry feature into individual geometries in Google Earth, you can use the "Split apart Multi Geometry" option. **Right-click on the feature in the left-hand panel and select this option.** This will break down the multi-geometry into its constituent parts, allowing you to edit or use them separately. [🔗](#)

### Steps:

#### 1. Locate the multi-geometry feature:

In Google Earth, find the feature you want to split in the "Places" panel on the left. It may be under "Temporary Places" or a specific folder. [🔗](#)

#### 2. Right-click and select "Split apart Multi Geometry":

Right-click on the feature's name. A context menu will appear. Choose the "Split apart Multi Geometry" option. [🔗](#)

#### 3. Edit or use the individual geometries:

The multi-geometry will be broken down into separate geometries (e.g., individual polygons or lines) that can now be edited, moved, or used independently. [🔗](#)

### Additional Notes:

- This function is particularly useful when dealing with KML files that contain complex multi-geometry features. [🔗](#)
- For more complex splitting scenarios, especially with large or very detailed geometries, consider using specialized GIS software that offers more advanced analysis and splitting tools. [🔗](#)
- **If you are working with a KML file that was originally created in a different GIS program and has a large number of features, you might encounter issues with display or splitting. In such cases, it can be helpful to simplify the KML file or use a different tool for processing the data.** [🔗](#)

**LAND SUITABILITY CERTIFICATE.**

This is to certify that **457.22 Ha.** of degraded forest land in Sunki-PRF-45.160 ha., Ralegeda PRF(Patch-I)-100.229 ha., Ralegeda PRF(Patch-II)-94.979 ha., Ralegeda PRF(Patch-III)-21.090 ha. of Semiliguda Range, Bhimdol-RF -107.078 ha., Kavidimal RF-41.006 ha. of Balda Forest Range and Chandalguda RF-47.678 ha. of Koraput Range in Koraput Forest Division identified for Compensatory Afforestation in lieu of 227.62 ha. of forest land for diversion of Basundhara (West) Extension OCP of M/s Mahanadi Coalfields Ltd. is suitable for plantation from Management of point of view and the degraded forest lands are free from encroachments and encumbrances.

  
Divisional Forest Officer,  
Koraput Forest Division.