



5 DECADES OF UNEARTHING ENERGY

Office of the Project Officer  
Kulda Open Cast Project  
Basundhara Area  
AT/PO- Blinga, Sundergarh  
Odisha-770076  
e-mail:po-kldp.mcl@coalindia.in

Ref: MCL/BA/PO/KOCP/2025-26/ 75 2

DATE: 11.12.2025  
12

To  
The Divisional Forest Officer,  
Sundargarh Forest Division,  
Sundargarh, Odisha.

**Sub:** Submission of Compliance of Stage-I Forest Clearance (Proposal No.: FP/OR/MIN/50293/2020) for Kulda OCP (Expansion) Project – reg.

**Ref:**

1. Stage-I Forest Clearance (FC) for Kulda OCP (134.69 Ha) issued by MoEF&CC, Govt. of India dated 10.07.2025.

Respected Sir,

With due regards please find herewith necessary documents of Stage-I compliance report for diversion of 134.69 Ha of Forest land of Kulda Expansion OCP bearing Proposal No.: FP/OR/MIN/50293/2020 and Stage-I Approval Date: 10.07.2025.

This is for your kind information and needful action please.

Yours faithfully,  
(for & on behalf of Mahanadi Coalfields Limited)

  
(Project Officer)

Kulda OCP, Basundhara Area  
Mahanadi Coalfields Limited

# Compliance Report of Stage-I Approval

Project: Kulda Expansion OCP, Basundhara Area, MCL

Forest Land: 134.69 ha

Proposal No.: FP/OR/MIN/50293/2020

Stage-I Approval Date: 10.07.2025

## **1) Legal status of the forest land shall remain unchanged.**

In compliance to the stipulated condition, it is agreed that the legal status of 134.69 ha of forest land proposed for diversion shall remain unchanged and an undertaking to the above effect is enclosed as **Annexure-I**.

**2(a). Compensatory Afforestation (CA) - The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation as per the approved CA Scheme at the current wage rate in consultation with State Forest Department in the account of CAMPA of the concerned State through online portal;**

In compliance to the above, CA scheme for 280.9 ha degraded forest land has been prepared by the State Forest Dept. ensuring 500 seedlings/ha, and MCL has deposited ₹10,99,09,200.00 towards CA as per the approved CA Scheme at the current wage rate in the state specific CAMPA account. The payment proof is enclosed herewith as **Annexure-II**.

**2(b). The cost of survey, demarcation and erection of permanent pillars, if required on the identified CA land, shall be deposited in advance with the Forest Department by the user agency. The CA will be maintained for 10 years. The scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years;**

In compliance to the stipulated condition, MCL has completed the work of survey, demarcation, and erection of permanent pillars on the identified compensatory afforestation land. The site-specific CA scheme also provides for afforestation of indigenous species and includes maintenance for 10 years, with provisions for anticipated cost escalations for works scheduled in subsequent years. Payment proof and approved CA scheme are enclosed as **Annexure-III**.

**2(c). The compensatory afforestation over degraded forest land i.e. 280.9 ha, shall be raised by the State Forest Department at the project cost and the afforestation works shall start within two years from the date of grant of final approval;**

In compliance to the stipulated condition, it is agreed that the compensatory afforestation over 280.9 ha of degraded forest land will be raised by the State Forest Department at the project cost. The afforestation works will be initiated within two years from the date of grant of final approval. An undertaking to this effect is enclosed as **Annexure-IV**.

  
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**2 (d). The State shall ensure that the CA scheme is prepared to accommodate at least 1000 seedlings/ha over DFL identified for CA. In case 1000 saplings cannot be accommodated per hectare in the DFL identified for CA, the balance seedlings will be planted in any RF/PF as per prescription of the working plan. The State Government will intimate the name/details of the RFs/PFs areas in which the balanced seedlings are to be planted. The user agency shall deposit the cost of plantation of the same.**

In compliance to the above, it is submitted that Para 2.8(ii) of the Handbook of Guidelines issued by MoEF&CC, GoI on 28.03.2019 also contained similar provisions regarding accommodating 1000 saplings per hectare over DFL identified for CA. However, the said paragraph was **deleted as per the decision of the Forest Advisory Committee (FAC)** in its meeting held on **23.04.2019 (Agenda No.11)**.

Furthermore, the **extant consolidated guidelines** issued by MoEF&CC, GoI on **29.12.2023** do **not prescribe any such provision** regarding the mandatory accommodation of 1000 seedlings per hectare in DFL identified for Compensatory Afforestation (CA). The condition imposed in the present proposal also **contradicts the guidelines** communicated on **08.11.2017** related to the number of seedlings to be planted against the forest land proposed for diversion.

In view of the above, it is humbly submitted that the requirement of accommodating at least **1000 seedlings per hectare** over the DFL identified for CA in respect of the present diversion proposal **may not be applicable**.

Accordingly, the **CA scheme prepared over an area of 280.90 ha.** of degraded forest land identified under the jurisdiction of **Sundargarh Forest Division** for Compensatory Afforestation, as per DSS analysis report, **accommodates 1,40,450 seedlings** against the required **1,34,690 seedlings**, which compensates the loss of trees at a ratio of **more than 1000 seedlings per hectare** in lieu of **134.69 ha.** of forest land proposed for diversion. Annexure-V.

**NPV: 3(a). The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. 5-3/2007-FC (pt.) dated 29.12.2023 through online portal of CAMPA account of the State Concerned; 3(a). Net Present Value (NPV) as per Hon'ble Supreme Court orders.**

In compliance to the above, **₹16,54,78,787.00** has been deposited via Parivesh portal. Payment proof is attached herewith as **Annexure-VI**.

**3(b). At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India; Undertaking to pay additional NPV if revised by Hon'ble Supreme Court.**

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In compliance to the above, an undertaking to this effect is being submitted for payment of additional NPV, if required, and is attached herewith as **Annexure-VII**.

**4) The State Govt. shall submit the compliance report in respect of Stage-I approval accorded to M/s MCL in Basundhara washery by MoEF&CC vide letter no 8-176/1997 FC(Vol) dated 11.03.2019;**

In compliance to the above, the complete compliance report is attached herewith as **Annexure-VIII**.

**5) The user agency shall prepare a schedule for surrender of the mined out and reclaimed Forest land in accordance with existing mine plan and submit the same along with an undertaking to surrender the mined out and reclaimed forest land as per such schedule to the ministry before grant of final approval under the Adhinyam for diversion of said Forest land.**

In compliance to the stipulated condition, a schedule for surrender of mined out and reclaimed forest land in accordance with existing Mining plan cum Mine closure Plan for Kulda OCP (Expansion) project, Basundhara Area, has been prepared and approved. The copy of the same is enclosed as **Annexure-IX**.

**6) A wildlife plan should be prepared for conservation and mitigation of impact on wildlife in consultation with CWLW and the same should be approved and monies deposited before final approval.**

In compliance to this effect, a Site-specific Wild Life Conservation Plan has been prepared in consultation with PCCF (Wildlife) & CWLW and accordingly an amount of ₹ 11,15,12,000.00 has been deposited into the state specific CAMPA account. The copy of approval and the payment proof is enclosed herewith as **Annexure-X**.

**7) Compensatory levies to be realized from the User Agency under the project shall be transferred/ deposited, through e-challan, in to the account of CAMPA pertaining to the State concerned through e-portal (<https://parivesh.nic.in/>);**

In compliance to the stipulated condition, all payments (CA, NPV, WLMP etc.) has been made via Parivesh portal into the CAMPA account. The payment proof is enclosed herewith as **Annexure-XI**.

**8) The KML files of diverted area, the CA areas, the proposed SMC treatment area and the WLMP area shall be uploaded on the e-Green watch portal along with GPS Ids and all other requisite details prior to final approval;**

In compliance to this effect, the respective KML files have been uploaded on Parivesh/e-Green Watch.

**9) Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department;**  
**a) Mitigative measures to minimize soil erosion and choking of stream shall be**

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**Implemented within a period of three years with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department;**

In compliance to the stipulated condition, a scheme amounting to ₹ 63,01,556.00 has been prepared and approved for implementation of mitigative measures to control soil erosion and prevent choking of streams, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XII**.

**9 b). Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;**

In compliance to the stipulated condition, a comprehensive scheme amounting to ₹ 8,58,44,558.00 has been prepared and approved for planting of adequate drought-hardy species and sowing of suitable seeds within the mining lease area to arrest soil erosion, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XIII**.

**9 c). Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;**

In compliance to the stipulated condition, a scheme amounting to ₹ 5,92,52,400.00 has been prepared and approved for construction of check dams, retention walls, and toe walls along the contours to arrest sliding and movement of excavated material, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XIV**.

**9 d). Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°;**

In compliance to the stipulated condition, a scheme amounting to ₹ 37,68,720.00 has been prepared and submitted for stabilization of overburden dumps through appropriate grading and benching, ensuring that the angle of repose at all locations remains below 28°, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XV**.

**10). Safety Zone Management: Following activities, at project cost, shall be undertaken by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines**

**a). User agency shall ensure demarcation of safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under**

  
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*the supervision of the State Forest Department;*  
*b). Boundary of the safety zone of the mining lease, adjacent to habitation/roads, should be properly fenced by the user agency;*  
*c). Safety zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under the supervision of the State Forest Department;*  
*d). The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms;*

In compliance to the stipulated condition, a comprehensive scheme amounting to ₹ 1,06,95,072.00 has been prepared for development and management of the safety zone, including green belt development, erection of RCC boundary pillars, fencing, and plantation activities, under the supervision of the State Forest Department. All RCC pillars will be erected and inscribed with DGPS coordinates as per the prescribed guidelines. Plantation within the safety zone will be undertaken as per the approved scheme to ensure dense canopy and effective regeneration. Regular monitoring and maintenance of the safety zone will be carried out under the supervision of the State Forest Department. The approved scheme is attached herewith as **Annexure-XVI**. An undertaking to this effect is enclosed as **Annexure-XVII**.

**11). No damage shall be caused to the top-soil and the user agency will follow the top soil management plan;**

In compliance to the stipulated condition, the Topsoil generated during mining operations will be separately stored and preserved in designated areas to prevent degradation and will be effectively utilized for reclamation and biological restoration as per the Topsoil Management Plan incorporated in the approved Mining Plan cum Mine Closure Plan. An undertaking to this effect is enclosed as **Annexure-XVIII**.

**12). User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF &CC before final approval;**

In compliance to the stipulated condition, a detailed scheme for the plantation and SMC activities has been prepared and approved by RCCF, Rourkela. The estimated cost of the scheme is ₹27,62,412. The work as per the scheme shall be carried out through the State Forest Department and hence the said amount has been deposited to the state specific CAMPA account. The payment proof has been attached herewith as **Annexure-XIX**. The approved scheme is attached herewith in **Annexure-XX**.

**13). The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of**

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**Identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF & CC before Stage-II approval;**

In compliance to the stipulated condition, the User Agency has prepared a list of existing village tanks and other water bodies located within five kilometers of the mining lease boundary, including their GPS coordinates. This list has been duly verified by the concerned Divisional Forest Officer. A detailed scheme for desilting the identified tanks and water bodies, prepared in consultation with the Forest Department, has been submitted and approved by RCCF Rourkela which is attached herewith as **Annexure-XXI**. The total cost of the scheme is ₹2,03,23,195.00 and the work will be carried out by the user agency at the project cost.

**14). The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;**

In compliance with the condition, the cost towards felling of trees will be deposited to the State Forest Department as per the demand raised. An undertaking to this effect, along with a commitment for phased tree felling and maximum possible translocation, has been submitted **Annexure-XXII**.

**15). Trees should be felled in phased manner as per the requirement in the approved Mining Plan with prior permission of concerned DFO;**

In compliance with the condition, an undertaking is being submitted to ensure that the tree felling will be carried out in a phased manner strictly as per the requirement of the approved Mining Plan and only after obtaining prior permission from the Divisional Forest Officer. The undertaking is attached herewith as **Annexure-XXII**.

**16). The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department.**

In compliance to the stipulated condition, it is undertaken to explore all possible measures for translocation of the maximum number of trees identified for felling. It is being ensured that tree felling will be carried out only when unavoidable and strictly under the supervision of the State Forest Department. The undertaking to this effect is attached herewith as **Annexure-XXII**.

**17). A site-specific Wildlife Management Plan shall be prepared by the State Government in consultation with the PCCF (Wildlife) for the protection and conservation of wildlife of the area. A copy of approved Plan shall be submitted to the Ministry along with the compliance of Stage-I approval. Entire cost of implementation of the provisions of the Wildlife Management Plan shall be deposited into the account of CAMPA of the State;**

In compliance to the stipulated condition, a site-specific Wildlife Conservation Plan has been prepared in consultation with the PCCF (Wildlife) for the protection and conservation of wildlife in the project area. The Plan has been duly approved by the PCCF (Wildlife) and the Chief Wildlife Warden. An amount of ₹11.15 crore has been deposited towards the

  
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implementation cost of the approved Plan into the CAMPA account of the State. The copy of approved Site Specific Wild Life Management Plan is attached herewith as **Annexure-XXIII**. The details of payment proof in respect of this is attached herewith as **Annexure-XXIV**.

**18). The State Government shall complete settlement of rights, in term of the Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, if any, on the forest land to be diverted and submit the documentary evidence, in accordance with the Rule 11 (7) of the Van (Sanrakshan Evam Samvardhan) Rules, 2023; The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area.**

In compliance to the stipulated condition, the settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, has been completed for the forest land proposed for diversion. The Forest Rights Act (FRA) certificate has been issued by the Collector, Sundargarh, in accordance with Rule 11(7) of the Van (Sanrakshan Evam Samvardhan) Rules, 2023 which is attached herewith as **Annexure-XXVI**.

**19). The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act, 1980, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concern Addl. Principle Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;**

In compliance to the said condition it is to state that the concurrent reclamation activities are being implemented from the very first year of mining operation as per the approved mining plan. The reclamation works include backfilling of excavated voids, grading, soil spreading, and biological reclamation through plantation over backfilled areas and stabilized external dumps. Progress of these activities is monitored regularly.

An annual report on implementation of concurrent reclamation plan is being prepared and submitted every year to the Nodal Officer (FCA), Government of Odisha, and the Regional Office, MoEF&CC, Bhubaneswar, as required under this condition.

The activities are progressing as per the approved schedule and the mine maintains a balance between excavation and reclamation. Hence, the condition is being complied with satisfactorily and will be maintained on a continuing basis. An undertaking to this effect however is being submitted herewith as **Annexure XXVII**.

**20). The User Agency shall comply with the Hon'ble Supreme Court order on regrassing, and re-grass the mining area and any other areas which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner;**

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In compliance with the Hon'ble Supreme Court order regarding regrassing of mined-out areas, MCL has taken up systematic regrassing and biological reclamation of backfilled and other disturbed areas to restore them for the growth of fodder, flora, and fauna.

Reclamation and regrassing are carried out as part of the concurrent reclamation plan from the initial years of mining operations. The process includes:

- Grading and leveling of backfilled areas to attain the desired slope.
- Spreading of topsoil and application of organic manure to enhance fertility.
- Broadcasting of grass seeds (such as *Chrysopogon zizanioides*, *Stylo hamata*, *Dicanthium annulatum*, *Cynodon dactylon*, etc.) for soil stabilization and development of ground cover.
- Plantation of suitable native species on dumps and reclaimed areas to promote ecological balance and biodiversity.

Thus, the condition is being **complied with and is being maintained on a continuing basis**. An undertaking however to this effect is being submitted herewith as **Annexure XXVIII**.

**21). Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended time to time and the Rules framed there-under;**

The diversion of forest land for the project is co-terminus with the period of the mining lease granted under the provisions of the **Mines and Minerals (Development and Regulation) Act, 1957**, and the rules framed thereunder, as amended from time to time.

Accordingly, the forest land diverted under this approval shall remain under the possession and use of the User Agency only for the validity period of the mining lease. It is hereby undertaken that upon expiry or termination of the lease period, the forest land shall be handed back to the Forest Department after completion of all **reclamation, rehabilitation, and regrassing measures** as prescribed in the approved Mine Closure Plan and in accordance with the Forest (Conservation) Act, 1980. The undertaking to this effect is attached herewith as **Annexure XXIX**.

**22). The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;**

The User Agency has already submitted the proposal for obtaining **Environmental Clearance (EC)** for the **Kulda Opencast Project (Expansion to 21.0 MTPA)** under the provisions of the **Environment (Protection) Act, 1986** and the **EIA Notification, 2006** vide **proposal no. IA/OR/CMIN/555625/2025**

The proposal is presently **under consideration of the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India**. Necessary studies including the **EIA/EMP report, public hearing, and Action plan for issues raised in Public Hearing** have been completed and submitted as part of the EC appraisal process.

The User Agency undertakes that mining operations under the expansion proposal shall commence only after obtaining the requisite Environmental Clearance from MoEF&CC.

  
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An undertaking to this effect is attached herewith as Annexure - XXX.

**23). No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;**

In compliance to the said condition, it is hereby undertaken that no labour camp shall be established on the forest land. The User Agency undertakes that all labourers and staff engaged in the project shall be accommodated outside the forest area in designated labour colonies or nearby villages with proper facilities.

The User Agency further undertakes to provide alternate fuel sources such as LPG or kerosene to all workers and staff deployed at the site to ensure that there is no dependence on nearby forest resources for fuel requirements. Strict supervision shall be maintained to ensure that no damage or pressure is exerted on the adjoining forest areas. An undertaking to this effect is being furnished herewith as Annexure - XXXI.

**24). The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;**

The User Agency undertakes that the boundary of the diverted forest land, mining lease, and safety zone, as applicable, shall be demarcated on the ground at the project cost by erecting four feet high reinforced cement concrete (RCC) pillars. Each pillar shall be inscribed with its unique serial number, the distance from the preceding pillar, and the corresponding GPS coordinates as per the approved demarcation plan.

The User Agency further undertakes to carry out this work under the supervision of the Forest Department and ensure that the demarcation is maintained in good condition throughout the lease period. Periodic inspection and maintenance of the pillars shall also be ensured to keep the boundary clearly identifiable at all times.

An undertaking to this effect is being furnished herewith as Annexure - XXXII.

**25). The layout plan of the proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal except the change in land use allowed on the forest land vide Ministry's guideline dated 26.12.2024;**

The User Agency undertakes that the approved layout plan of the project shall not be altered or modified without obtaining prior approval from the Central Government. The User Agency further undertakes that the diverted forest land shall be used strictly for the purpose

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specified in the approved proposal and not for any other activity, except for such changes in land use as may be permitted under the Ministry's guideline dated 26.12.2024.

Any future requirement for change in layout or land use, if unavoidable, shall be duly submitted to the competent authority for prior approval before implementation.

An undertaking to this effect is being furnished herewith as **Annexure - XXXIII**.

***26). The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;***

The User Agency undertakes that the forest land proposed for diversion shall not, under any circumstances, be transferred, leased, or assigned to any other agency, department, or individual without obtaining prior approval of the Central Government.

The User Agency further undertakes to retain full responsibility for the management, use, and protection of the diverted forest land strictly for the purpose for which it has been approved.

An undertaking to this effect is being furnished herewith as **Annexure - XXXIV**.

***27). No damage to the flora and fauna of the adjoining area shall be caused;***

The User Agency undertakes that no damage shall be caused to the flora and fauna of the adjoining forest and non-forest areas during the execution and operation of the project. Necessary precautions and mitigation measures shall be implemented to prevent any adverse impact on biodiversity.

The User Agency further undertakes to ensure that all project-related activities shall be carried out in an environmentally responsible manner under the supervision of competent authorities, and any observation or recommendation from the Forest Department regarding protection of flora and fauna shall be strictly complied with.

An undertaking to this effect is being furnished herewith as **Annexure - XXXV**.

***28). The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;***

The User Agency undertakes to submit the annual self-compliance report in respect of all the stipulated conditions to the State Government, the concerned Regional Office of the Ministry, and the Ministry of Environment, Forest and Climate Change by the end of March every year, on a regular basis.

  
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The User Agency further undertakes to ensure that the compliance report shall include updated status of implementation of each condition along with supporting documents, photographs, and relevant evidence for verification by the competent authorities.

An undertaking to this effect is being furnished herewith as **Annexure - XXXVI**.

**29) Any other condition that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife; and**

The User Agency undertakes to abide by any additional condition that may be stipulated by the concerned Regional Office of the Ministry with the approval of the competent authority, in the interest of conservation, protection, and development of forests and wildlife.

The User Agency further undertakes to implement such additional conditions in letter and spirit within the specified time frame and to report the compliance status to the concerned authorities as required.

An undertaking to this effect is being furnished herewith as **Annexure - XXXVII**.

**30). The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.**

The User Agency undertakes to comply with all the provisions of the applicable Acts, Rules, Regulations, Guidelines, and Orders issued by the Hon'ble Courts and the National Green Tribunal (NGT) that are in force or may come into force from time to time in relation to this project.

The User Agency further undertakes to ensure that all project activities shall be carried out strictly in accordance with the prevailing legal and regulatory framework, and any directions or observations issued by the competent authorities or judicial bodies shall be promptly implemented in true letter and spirit.

An undertaking to this effect is being furnished herewith as **Annexure - XXXVIII**.

**31). Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of Chapter 1 of the Consolidated Guidelines and Clarifications on Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as issued by this Ministry's letter dated 29.12.2023;**

The User Agency undertakes to ensure strict adherence to all the conditions stipulated in the Stage-I Forest Clearance approval. It is further undertaken that no violation of any of these conditions shall occur during the execution and operation of the project.

  
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An undertaking to this effect is being furnished herewith as **Annexure - XXXIX**.

**32). The compliance report shall be uploaded on e-portal (<https://parivesh.nic.in/>)**

The User Agency undertakes to upload the annual and periodic compliance reports in respect of the stipulated conditions on the e-portal (<https://parivesh.nic.in/>) within the prescribed timelines.

The User Agency further undertakes to ensure that all compliance reports are complete in all respects, supported with relevant documents, photographs, and geo-tagged evidence wherever applicable, for verification by the competent authorities through the online system.

An undertaking to this effect is being furnished herewith as **Annexure - XXXX**.

This report is submitted for kind perusal and onward transmission for grant of final approval from MoEF & CC under Section-2 of the Forest (Conservation) Act, 1980.

Encl.: Annexure-I to XXXX

Yours faithfully,

  
06/11/2023

Project Officer,  
Kulda OCP,

Basundhara Area, MCL

Project Officer  
Kulda Opencast Projec.  
परियोजना अधिकारी  
कुल्डा परियोजना



**UNDERTAKING FOR NON-CHANGING OF LEGAL STATUS  
OF FOREST LAND**

**Annexure-I**

It is agreed that the Legal status of the 134.69 ha. of Forest Land proposed for diversion for Kulda Expansion OCP shall remain unchanged.

  
(Signature of User Agency)  
Official Seal

Date...06.11.2025.....

Place...Basundhara.....

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

AGENCY COPY

यूनियन बैंक ऑफ इंडिया Union Bank of India



NEFT / RTGS CHALLAN for CAMPA Funds

Date : 23-08-2025

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	5850293737
MoEF/SG File No.	8-07/2024-FC
Location.	ORRISA
Address.	Kulda OCP, MCL Basundhara Area, Sundergarh, Odisha 779076Sundergarh
Amount(In Rs)	275387987/- ✓

Amount in Words : Twenty-Seven Crore Fifty-Three Lakh Eighty-Seven Thousand Nine Hundred and Eighty-Seven Rupees Only

NEFT/RTGS to be made as per following details;

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150825850293737 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCS Centre, 21/1, III Floor, Jalita Towers, Mission Road, Bengaluru-560027

SRINR52025082696596623

7409443 KAS. KERKETTA  
S.E.J. BALINGA BRANCH  
26 AUG 2025  
COOP  
Note: After making the required payment through the  
even after 7 working days then send a copy of  
to Email: fc@unionbankofindia.bank  
ubin0903710@unionbankofindia.bank

*Handwritten signature and date: 20/8/25*

4221 26 AUG 2025 TR  
Journal No.  
Checker ID No.  
*Handwritten signature and date: 26/8/25*

*Handwritten signature: Sumanath Panda*

AUTHORIZED SIGNER  
MCL, BASUNDHARA AREA

CA RS-10.99.09.200/-  
MVA RS-16.54.78.787  
RS. 275387987



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



Phone No-06622-272243, E-Mail- [dfo.sundargarh@odisha.gov.in](mailto:dfo.sundargarh@odisha.gov.in)

No. 4015 /4F (Misc.) /Dated. 22 /07/2025

To

The Project Officer,  
Kulda OCP Basundhara Area, (MCL)  
Sundargarh, Odisha-770076.

Sub: - Submission of Compensatory afforestation amount demand Proposal for seeking prior approval of the central government under section-2 (1) (ii) of the van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kulda Open Cast coal mining project of Basundhara area of Mahanadi Coalfields Limited in Sundargarh district under Sundargarh Forest Division. (Proposal o. FP/OR/IN/50293/220) – Stage-I approval regarding.

**-Demand for amount of Compensatory Afforestation.**

Ref: - 1. Stage-I approval Order No.8-07/224-FC dated.10.07.2025 of Assistant Inspector of General of Forests, FC Division, GoI, MoEF & CC, New Delhi.  
2. Memo No.15311 dt.19.07.2025 of CCF (Nodal) O/o the PCCF & HoFF, Odisha Bhubaneswar.

Sir,

With reference to the letter cited above, as per stipulated condition no. 2.(a) of Stage-I approval order, the PCCF ( FD & Nodal Officer, FC Act) has technically approved the financial outlay of Compensatory Afforestation scheme over an area of **280.90 ha of Degraded-Forest land** identified in (1) Sikajore A-RF (2) Sikajore-PRF (3) Tangarpali-DPF (4) Pandripani-RF (5) Sidharmunda- RF and (6) Punjipahar- RF as per matrix 2025-26 of approved One-time cost norm with a total financial outlay of **Rs.10, 99, 09, 200/-** (Rupees Ten crore ninety nine lakhs nine thousand and two hundred) only vide letter under reference.

Therefore, you are requested to deposit the amount of **Rs.10, 99, 09, 200/-** (Rupees Ten crore ninety-nine lakhs nine thousand and two hundred) towards Compensatory Afforestation scheme over an area **280.90Ha** through 'E' payment mode by using web portal of <http://parivesh.nic.in> (Parivesh Portal) of MoEF & CC, CAMPA account vide letter under reference and submit the original proof with seal and signature of the issuing bank to this Office needful action. The copy of total financial outlay of the project is enclosed herewith.


Encl: - As above

Yours faithfully,

Divisional Forest Officer,  
Sundargarh Forest Division

Memo No. 4016 /Dated 22 /07/2025

Copy forwarded to the Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC-Act, O/o the PCCF & HoFF, Odisha, Bhubaneswar for favour of kind information and necessary action with reference to his Memo No. 15308 dt.19.07.2025

  
Divisional Forest Officer,  
Sundargarh Forest Division

Memo No. 4017/Dated 22 /07/2025

Copy forwarded to the Regional Chief Conservator of Forests, Rourkela Circle, Rourkela for favour of kind information and necessary action with reference to Memo No. 15310 dt.19.07.2025 of Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC-Act, O/o the PCCF & HoFF, Odisha, Bhubaneswar.

  
Divisional Forest Officer,  
Sundargarh Forest Division



STATE FOREST HEADQUARTERS, ODISHA  
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS & HoFF  
PLOT NO. GD-2/12, ARANYA BHAWAN, CHANDRASEKHARPUR  
BHUBANESWAR-751023  
E-mail:- [nodal.pccfodisha@gmail.com](mailto:nodal.pccfodisha@gmail.com)

Memo No. 15308 /9F(MG)-49/2023  
Dated, Bhubaneswar the 19<sup>th</sup> July, 2025

To

The Divisional Forest Officer  
Sundargarh Forest Division

**Sub:** Proposal for seeking prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sarankshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh District under Sundargarh Forest Division (Proposal No.FP/OR/MIN/50293/2020) - Stage-I approval regarding.

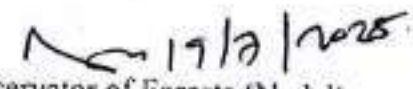
**Ref:** Stage-I/ In-principle approval No.8-07/2024-FC dated 10.07.2025 of the Assistant Inspector General of Forests, FC Division, GoI, MoEF & CC, New Delhi.

Enclosed, please find herewith a copy of Stage-I/ In-principle approval No.8-07/2024-FC dated 10.07.2025 of the Assistant Inspector General of Forests, FC Division, GoI, MoEF & CC, New Delhi which is self-explanatory, for information and necessary action.

The financial outlay for Compensatory Afforestation Scheme over an area of 280.90 ha of Degraded-Forest land identified in (1) Sikajore A-RF, (2) Sikajore PRF, (3) Tangarapali DPF, (4) Pandripani RF, (5) Sidharmunda RF and (6) Punjipahar RF in Sundargarh Forest Division in respect of the above mentioned project has been approved by Addl. PCCF (FD & Nodal Officer, FC Act) as per matrix 2025-26 of approved One-time cost norm for Rs.10,99,09,200/- (Rupees Ten crore ninety nine lakhs nine thousand and two hundred) only is enclosed.

In this context, I am directed to request you to raise demand on the user agency for payment of compensatory levies through web portal of MoEF&CC and submit the deposit particulars of the amount paid in prescribed CAMPA format alongwith the Stage-I compliance through RCCF, Rourkela Circle for onward transmission to the GoI, MoEF & CC, FC Division, New Delhi.

Encl-As above

  
Chief Conservator of Forests (Nodal)



Memo No. 15309 Dt 19.07.2025

Copy along with its enclosures forwarded to the Principal Chief Conservator of Forests, (WL) & CWLW, Odisha for favour of kind information & necessary action.

Memo No. 15310 Dt 19.07.2025

Copy along with its enclosures forwarded to the RCCF, Rourkela Circle for information & necessary action.

19/7/2025  
Chief Conservator of Forests (Nodal)

Memo No. 15311 Dt 19.07.2025

Copy along with its enclosures forwarded to Chief Manager (Mines), Project Officer, Kulda OCP, Basundhara Area, MCL, Sundargarh, Odisha-770076 for information and necessary action with reference to Stage-I/ In-principle approval No.8-07/2024-FC dated 10.07.2025 of the Assistant Inspector General of Forests, FC Division, GoI, MoEF & CC, New Delhi.

19/7/2025  
Chief Conservator of Forests (Nodal)

19/7/2025  
Chief Conservator of Forests (Nodal)

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Financial Outlay for Compensatory Afforestation Scheme over an area of 280.90 ha of Degraded Forest land identified in (1) Sikajore A-RF, (2) Sikajore PRF, (3) Tangarpali DPF, (4) Pandripani RF, (5) Sidharmunda RF and (6) Punjipahar RF in Sundargarh Forest Division against diversion of 134.69 ha of forest land for Kulda Extension Opencast Project of Mahanadi Coalfield Limited (MCL) in Basundhara Area of District Sundargarh under Sundargarh Forest Division as per matrix 2025-26 of approved One-time Cost Norm

Sl. No.	Description	Amount (Rs.)
1.	Cost of ANR Plantation @ 500 Plant per ha over 280.90 ha @ Rs.1,65,433/- per ha with 10 years maintenance	4,64,70,129.00
2.	Cost of Bamboo Twig and Thorn fencing over 34,424.41 ha with 5 years maintenance @ Rs.1,21,512/- per ha/ 250 RMT (As proposed by DFO, Sundargarh Forest Division)	1,67,31,915.00
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs.43,310.00 per ha over 280.90 ha with 5 years maintenance	1,21,65,779.00
4.	Watering by Solar Borewell fitted with Drip System for 1,40,450 Nos. of plants @ Rs.2,45,933/- per 1000 plants (As proposed by the DFO, Sundargarh Forest Division)	3,45,41,289.00
<b>Grand Total</b>		<b>10,99,09,112.00</b> or rounded off to <b>10,99,09,200.00</b>

(Rupees Ten Crore Ninety Nine Lakhs Nine Thousand and Two Hundred) only

Approved

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

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



**REVISED COMPENSATORY  
AFFORESTATION SCHEME**

**FOR**

**KULDA EXPANSION OCP**

**OF**

**MAHANADI COALFIELDS  
LIMITED**

**SUNDARGARH FOREST DIVISION**

**SUNDARGARH (ODISHA)**



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10	DSS Analysis Reports duly Signed by DFO, Sundargarh & countersigned by RCCF, Rourkela	48-67
11	Joint Verification Report	68-69
12	Corresponding Topo map of each Site(1:50000 Scale) (Plate-I, II& III)	In a Folder
13	Corresponding Geo referenced map of each site	In a Folder
14	KML file of Each site	In CD Form

### Land Suitability Certificate

*This is to certify that the Degraded Forest Land identified in forest Blocks as listed below and allotted for Compensatory Afforestation purpose under Sundargarh Forest Division against diversion of 134.69 ha for Kulda OCP Extension Project of MCL, Basundhara area is free from encroachment and encumbrances. The area is suitable for plantation and in Reserved Forests / Proposed Reserved Forest / Demarcated Protected Forests under administrative Control of forest department.*

Sl No	Name of forest block	Area identified in Ha	Range
1	Sikajore A-RF	74.50	Lephripada
2	Sikajore PRF	40.00	Lephripada
3	Tangarpali DPF	14.00	Ujalpur
4	Pandripani RF	64.30	Gopalpur
5	Sidharmunda RF	50.40	Gopalpur
6	Punjipahar RF	37.70	Gopalpur
	<b>Total 6 patches</b>	<b>280.90</b>	



Divisional Forest Officer,  
Sundargarh Forest Division

**Scheme for Compensatory Afforestation over 280.90 ha of Degraded Forest Land against diversion of 134.69 ha of forest land for Kulda Extension Opencast Project of Mahanadi Coalfield Limited (MCL) in Basundhara Area of District Sundargarh under Sundargarh Forest Division.**

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**1.0 Background:**

The Kulda Extension Opencast Project is over an area of 634.205ha. In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam. For diversion of Forest land for non-forestry use Diversion Proposal has been filed online vide Proposal No FP/OR/MIN/50923/2020 under provisions of Forest (Conservation) Act, 1980 now renamed as *Van (Sanrakshan Evam Samvardhan) Adhiniyam*, 1980.

**2.0 Compensatory Afforestation land Identified & provided with the Proposal:**

As Mahanadi Coalfield Limited (MCL) is a Central Government Public Sector Unit, Degraded Forest Land (DFL) under the administrative control of Forest department (Sundargarh Division) over an area of 305.59 ha (effective area- 286.96 ha) had been provided. The forest block wise area provided is as follows.

Sl No	Name of the forest block	Gross Area in ha Provided for CA Purpose	Effective area in Ha	Planting Model adopted / suggested.
1	Pandripani RF	64.10	56.30	ANR With Gap Planting @ 600 plants / Ha
2	Sidharmunda RF	53.56	53.56	ANR With Gap Planting @ 400 plants / Ha
3	Punjipahar RF	131.54	121.00	ANR With Gap Planting @ 600 plants / Ha
4	Panikholia RF	56.39	56.10	ANR With Gap Planting @ 400 plants / Ha
	Total	305.59	286.96	1,43,480 No of plants

### 3.0 Observation by Govt. of India, MoEF&CC, New Delhi:

In the process of approval of the proposed diversion of 134.69 ha, the MoEF&CC, GOI, New Delhi has observed on Compensatory Afforestation Land provided and communicated vide letter No 8-7/2024-FC dated 06.01.2025

#### Observation:

*The area proposed for CA on DFL is having MDF over 116 ha as per DSS analysis. Further as informed by the state the area involves road, cultivated land and claims under FRA, 2006 which indicate that the area proposed for CA is neither completely suitable for plantation nor it is free from encumbrances. The state Govt., shall therefore exclude the area which is not suitable for CA and provide alternate DFL twice in extent to the area proposed for diversion which is suitable for raising plantation and is free from all encumbrances. All requisite details with respect to the Revised CA area shall be provided.*

#### 3.1 Effective Area on the Sites Proposed Earlier.

Sl No	Name of the forest block	Gross Area in ha Provided for CA Purpose earlier	Area (not Suitable)		Balance Area suitable for CA
			MDF (as per DSS System)	Plantation / road etc	
1	Pandripani RF	64.10	0		64.30
2	Sidharmunda RF	53.56	0		50.40
3	Punjipahar RF	131.54	65.00	18.30	37.70
4	Panikholia RF	56.39	51.00		0
	<b>Total</b>	<b>305.59</b>	<b>116.00</b>	<b>18.30</b>	<b>152.40</b>

The Panikholia RF will be completely omitted from CA Scheme Purview. The area available for Planting is 152.40 ha and will be afforested with ANR with Gap planting (plant density of 500 plants per Ha).

#### 4.0 Alternate CA Land Identified & Provided.

Considering the observations of MoEF&CC, Govt. Of India, New Delhi, in addition to the CA land provided as indicated under Para2.0, DFL has been identified and provided as additional / Alternate CA land against 116 ha of MDF and reduced effective area due to

Roads, cultivated land and claims settled under FRA, 2006 vide Letter No 1443/ 4F(Misc) Dated 17.03.2025 of DFO, Sundargarh (Annexure-II). The details of alternate CA land identified are furnished below.

DFL identified for taking up Compensatory Afforestation in lieu of Diversion of 134.69 ha for Kulda Ext. OCP				
Sl No	Name of forest block	Area identified in Ha	Range	Planting Model Proposed
1	Sikajore A-RF	74.50	Lephripada	ANR With Gap Planting @ 500 plants / Ha & intensive SMC
2	Sikajore PRF	40.00	Lephripada	
3	Tangarpali DPF	14.00	Ujalpur	
	<b>S. Total</b>	<b>128.50</b>		<b>64250 no of Plants</b>
Area available from initial identified forests				
1	Pandripani RF	64.30	Gopalpur	ANR With Gap Planting @ 500 plants / Ha & intensive SMC
2	Sidharmunda RF	50.40	Gopalpur	
3	Punjipahar RF	37.70	Gopalpur	
	<b>S. Total</b>	<b>152.40</b>		<b>76200 Plants</b>
	<b>Total 6 patches</b>	<b>280.90</b>		<b>140450 plants</b>

#### 4.1 Location Details:

##### a) Sikajore A Reserved Forest:

The total area of Sikajore A RF is 507.61ha and under Lephripada Range of Sundargarh Division. Total 74.50ha DFL has been identified in three patches. (Patch-1: 54.0 Ha; Patch-2: 10ha and Patch-3: 10.50 ha).

The selected area finds place in Survey of India Topo sheet No (1: 50000 Scale). The corresponding Topo Map (All three patches in one Sheet) is at **Plate No-1**

##### b) Sikajore PRF

Total area of Sikajore PRF is 82.96ha under Lephripada Range of Sundargarh Division. The identified area is 40.00 Ha in one patch. The selected area finds place in Survey of India Toposheet No (1: 50000 Scale). The corresponding Topo Map is at **Plate No-1**

##### c) Tangarpali DPF

Total area of Tangarpali DPF is 328.852ha under Ujalpur Range of Sundargarh Division. The identified area is 14 Ha in one patch. The selected area finds place in Survey of India Topo

sheet No (1: 50000 Scale). The corresponding Topo Map (All three patches in one Sheet) is at **Plate No-2**

**d) Pandripani RF**

The Total area of Pandripani RF is 205.18ha under Gopalpur Range of Sundargarh Division. Out of 205.18ha, 64.30ha has been identified for Compensatory afforestation purpose. The Latitude / Longitude of survey points (GPS Coordinates) is at Annexure-VI.

The selected area finds place in Survey of India Toposheet No (1: 50000 Scale). The corresponding Topo Map is at **Plate No-3**

**e) Sidharmunda RF**

The Total area of Sidharmunda RF is 65.56 Ha under Gopalpur Range of Sundargarh Division. Out of 65.56ha, 50.40ha has been identified for Compensatory afforestation purpose. The selected area finds place in Survey of India Topo sheet No (1: 50000 Scale). The corresponding Topo Map is at **Plate No-3**

**f) Punjipahar RF**

The Total area of Punjipahar RF is 611.09Ha under Gopalpur Range of Sundargarh Division. Out of 611.09ha, 37.70 ha has been identified for Compensatory afforestation purpose. The selected area finds place in Survey of India Topo sheet No (1: 50000 Scale). The corresponding Topo Map is at **Plate No-3**

**4.2 Detail Administrative Jurisdiction:**

The identified area comes under Lephripada Range, Ujalpur Range and Gopalpur Range under Sundargarh Division as indicated below.

Name of Forest Block	Patch No	Range	Section	Beat	Remark / map reference
Sikajore-A RF	1	Lephripada	Gundiadihi	Halma	F44L15/Plate-1
	2	Lephripada	Gundiadihi	Halma	F44L15/Plate-1
	3	Lephripada	Gundiadihi	Halma	F44L15/Plate-1
Sikajore PRF	1	Lephripada	Gundiadihi	Halma	F44L15/Plate-1
Tangarpali DPF	1	Ujalpur	Ujalpur	Rupabahal	F44L16/Plate-2
Pandripani RF	1	Gopalpur	Gopalpur	Sarangijharia	F44L16/Plate-3

Sidharmunda RF	1	Gopalpur	Gopalpur	Garjanbahal	F44L16/Plate-3
Punjipahar RF	1	Gopalpur	Duduka	Duduka	F44L16/Plate-3

#### 4.3 Topography & Soil:

The area identified is generally plain to moderately slope of 10<sup>0</sup> -15<sup>0</sup>

The soil is alluvial soil with good soil depth. Patches of gravelly soil is also observed but with limited extent. Soil depth is quite good to sustain vegetation / trees of long term rotation. The soil is compact and hard. It encourages high runoff during rains.

Top soil erosion is normally observed. No reel of Gully formation has been observed in general.

#### 5.0 Available Vegetation & Crop Density:

##### 5.1 Available Vegetation:

The forest blocks identified for compensatory afforestation are Dry Deciduous Sal Forest. In blank areas associates of Sal i.e. Saplings / poles of Chara (*Buchanania lanzan*), Kendu (*Diospyros melanoxylon*), Karada (*Cleistanthus collinus*), Dhaura (*Anogeissus latifolia*), Asana (*Terminalia tomentosa*) are observed. Eupatorium is commonly observed as weeds and hindering with the establishment of natural saplings / Seedlings.

##### 5.2 Crop Density.

The crop density of the identified patches / Forest blocks have been examined through DSS (Decision Support System). The crop density status as observed is furnished below.

Name of forest Block	Patch No	Area in ha	Area classified			Total
			MDF	OF	NF	
Sikajore-A RF	1	54.00	0	44.0	10.0	54.00
	2	10.50		1.0	9.00	10.00
	3	10.00	0	1.0	9.00	10.00
	<b>Sub Total</b>	<b>74.50</b>	<b>0</b>	<b>46.00</b>	<b>28.00</b>	<b>74.00</b>
Sikajore PRF	1	40.00	0	23.00	17.00	40.00
Tangarpali DPF	1	14.00	0	5.00	9.00	14.00
Pandripani RF	1	64.30	0	7.00	57.00	64.00
Sidharmunda RF	1	18.0	0	17.0	1.0	18.00
		32.4	0	0	32.40	32.40

Punjipahar RF	1	37.70	0	2.00	36.0	38.00
<b>Total</b>		280.9	0	100.0	180.0	280.9

## 6. Planting Model Suggested:

Basing on DSS analysis Report and field observation, it is proposed to adopt Planting model i.e. ANR with Gap planting @500 Plants per ha. Total seedling to be planted is 1, 40,450 no (280.9 ha X500).

### 6.1 Choice of Species:

The identified area is within Forest Blocks under management as per Working Plan prescription. (The outgoing Working Plan by Sri T.A.K.sinha IFS has been extended for one year i.e. 2025-26. The PWPR has also be approved by the MoEF&CC, IRO, Bhubaneswar. The area identified / forest blocks are under Rehabilitation Working Circle. Choice of Species will be guided by the present vegetation and species which will merge with natural vegetation after say 20 years.

Choice of species are:

- i. *Adiana Cardifolia* (Kuruma / Haldu)
- ii. *Anogeissus latifolia* (Dhaura)
- iii. *Bombax Ceiba* ( Simili)
- iv. *Cassia fistula* (Sunari)
- v. *Emblica officinalish* ( Anla)
- vi. *Madhuca indica* (Mahula);
- vii. *Manjifera indica* (Aam)
- viii. *Pterocarpus marsupium* ( Bija)
- ix. *Terminalia belerica* (Bahada)
- x. *Terminalia tomentosa* ( Asana)
- xi. *Xylia xylocarpa* (Tangan);
- xii. Any other species found suitable for the Purpose.

**(NB: the forest Blocks taken for CA purpose are not coming in Bamboo Zone of the Division)**

## **7.0 Planting parameters as indicated in Approved Cost norm:**

### **a) *Survey, Demarcation and Pillar Posting:***

The identified area has been surveyed & pillars posted. It is to be resurveyed and missing pillars if any to be reposted as per Latitude / Longitude provided in the DGPS Map/ enclosed annexure,

### **b) *Preparation of Treatment map (Digital map):***

The Kml file of the area has been provided by the user agency after DGPS survey. The same will be updated with treatment design basing on physical position at the time of implementing the Plantation Scheme. The Range Officer will update the position with help of GIS cell of the Division / PCCF Office or through outsourcing.

### **c) *Site Preparation:***

After demarcation of the area, site preparation mostly clearing of invasive weeds / debris will be taken up as and where required.

### **d) *Silvicultural Cleaning:***

The present forest growth has been affected by biotic interference. The crop is degraded. There is every possibility of reviving the damaged saplings, Whippy growth under appropriate silvicultural tending operation. The following operations are prescribed.

- Cutting of High stumps (living one) with vigour to produce coppice shoots,
- In case of stumps having multiple coppice shoots, the promising shoots are to be retained and weak / lean shots are to be removed;
- Available natural seedling / saplings are to be retained and if required may be treated during soil working / weeding provided to planted seedlings;
- The area is mostly devoid of climbers, only annual climbers hindering with the natural growing seedlings / Saplings are to be cleared.
- Woody Fibrous climbers are to be retained. This is acting against uprooting of existing trees by interlocking the trees.

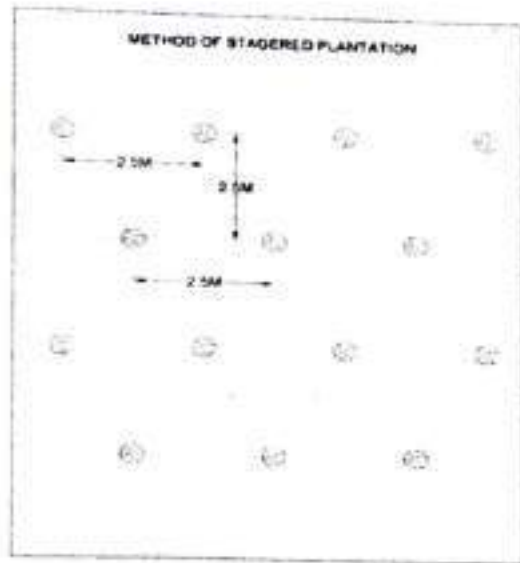
### **e) *Alignment & Stacking:***

The plantation Model is gap planting @500 Plants per ha. There are blank areas in a scattered manner. All endeavor will be taken to take up stacking at a spacing of 2.5mx2.5m. The alignment will be of staggered manner to check runoff in sloppy terrain. The desired model is depicted in the right margin.

No stacking is to be given under a tree / shades. Stacking may be given in partially shady locations and during planting Shade bearing species / Partially Shade bearing species are to be planted

**f) Digging of Pits (45cmx45cmx45cm):**

It is proposed to dugout pits of size 45 cm x 45 cm preferably in month of February / March. The dugout earth will be kept at pit head on both sides separately. The top soil will be kept on one side and bottom soil on another side. Soil within 30cm from ground level will be considered as top soil and rest as bottom soil. The pits will be left for weathering due to Sun & Rain.



**g) Refilling of Pits & application of organic Compounds / CDM/ FYM:**

The pits will be refilled by altering the dugout soil of the pits i.e. top soil on bottom of the pit and bottom soil on top. Application of organic Compounds / CDM/ FYM & mixing the same properly before refilling is suggested. This will provide necessary nutrients to the plant as well as help in retaining soil moisture for a longer period.

**h) Transportation of Seedlings (18 month Old) including short carriage & watering at Pit site.**

In the approved cost norm, provisions have been made to plant 18 month old seedlings. As seedlings will be above 1m height invariable, careful transportation of seedlings will be of paramount importance. In case of top breaking of seedlings, the benefit of 18month old seedlings will be reduced substantially. Transportation of seedlings from Nursery site to Planting site and then short carriage has to be taken up carefully. Wherever water is available, the plants are to be watered before short carriage to minimize the shock to plants during long carriage by tractors / vans etc.

**i) Planting of Seedlings:**

After application of FYM/ CDM/ Organic manure, seedling will be planted carefully. The standard planting procedure is to be followed. As the pit size is of 45cm x 45cm x 45cm the following care will be taken during planting.

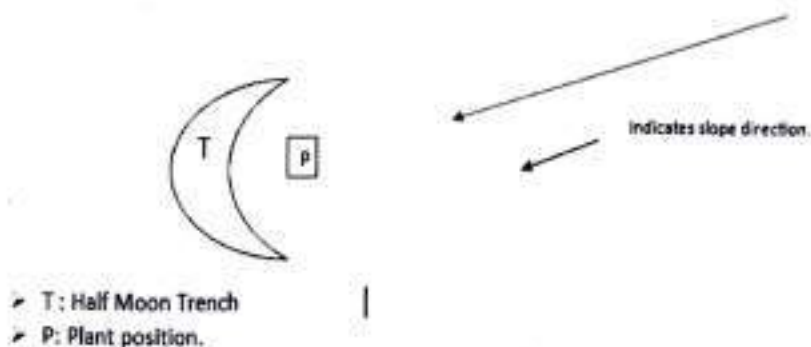
- Chemical fertilizer / insecticides applied as basal doze to be thoroughly mixed with soil.
- Seedlings collar zone will be at Ground Level or at best 2.5cm below the ground level. In no case it will not be more than 3cm below Ground Level.
- The Poly bags containing the seedlings are to be carefully removed. It is better to use a blade to cut open the bag so as to cause least disturbance to the ball of earth containing the seedlings.
- After planting the soil is to be compacted leaving 3" around the plant and the compact soil may be at Ground Level or 1" above the Ground level – allowance for soil settlement.
- In no case it should be a sunken around the plant.
- The planted plant should stand erect, if it is tilted due to speedy growth, a support with a stick collected locally to be provided.

***J) Casualty Replacement:***

Casualty replacement is an important operation to achieve a 100% survival in a plantation. After planting there is possibility of casualty in planted seedlings. There is a provision to replace casualty up to 10% in 1<sup>st</sup> year and 10% in 2<sup>nd</sup> year operation in the approved cost norm. The same is to be carried out with good promising seedlings those can come up to a height of previous planted seedlings. During replacement in 2<sup>nd</sup> year application of fertilizers etc as in 1<sup>st</sup> year is to be followed.

***k) Weeding & application of Fertilizer:***

Two Weeding around the planted seedlings at a diameter of 1.00m has been prescribed in the approved cost norm. During 2<sup>nd</sup> weeding deep soil working around the plants at 1.00m diameter has also been prescribed. 1<sup>st</sup> weeding will be taken up just after one month of planting and 2<sup>nd</sup> weeding and soil working in month of September / October. As there is occasional rainfall in October providing half-moon trench in sloppy terrain around each plant is suggested. A half-moon trench model is given below.



During weeding (1<sup>st</sup>& 2<sup>nd</sup>) there is a provision of application of fertilizer to plants. Application of NPK @30gms per plant x 2 times is suggested. In no case 2<sup>nd</sup> weeding can be delayed beyond 15<sup>th</sup> of October.

There is a provision of one weeding in the 2<sup>nd</sup> year (complete weeding), Soil working and manuring at a 1m diameter around the plant, the same is to be implemented as described for 1<sup>st</sup> Year.

Extra endeavor is to be made to provide soil working / manuring to naturally occurring seedling in the planted area as their survival is quite ensued. It will help in restocking the area at a short period. Its mention may be made in the Plantation Journal.

#### **l) Fire line Tracing & Inspection Path:**

Due to intensive protection grasses grow up within plantation. It is better to allow local people / VSS to cut the grasses take for stall feeding. Due to fallen dry leaves (Due to leaf shedding), there is possibility of fire hazards in February / March. It is suggested to have fire line at a width of minimum 3m all around the planting area, maintain inter partitioned line / both sides of foot path as a Fire line ( minimum 3m wide in 1<sup>st</sup> year and 2m in subsequent year). These lines will be maintained as inspection path also. It will be maintained till completion of 10<sup>th</sup> year.

#### **m) Watch & Ward**

Watch and ward is essentially required against grazing in first two years and illicit felling in subsequent years. Adequate provisions have been made in the approved cost norm. Watch & ward provisions will be implemented as per provide norm. Besides watch & ward provided it is proposed to provide Bamboo Twig & Thorns fence around the Selected / identified area.

The various operations described above is in line of operations defined in the Onetime Cost norm approved vide Office Order No 1109/9F-(Misc0-387/2021 dated 08<sup>th</sup> November, 2021. In case of any contradiction the approved steps / planting process will be followed.

## **8.0 Cost estimation.**

### **8.1 ANR & Planting cost:**

In the approved Cost norm the financial projection for year of Plantation with 10 years maintenance has been projected in the Cost norm matrix which take care of enhancement of wage rate. The cost projected for the Year 2026-27 will be taken in to consideration for cost estimation. The ANR & Planting cost comes to Rs 4, 87, 93,735/- @ Rs 1, 73,705/- per Ha. The Forest block Wise cost estimated is given below.

**Cost Norm Matrix For ANR plantation (@500 Seedlings per hectare )**

Sl no	Commencement of year	VI (0 <sup>th</sup> Yr)	VII (1 <sup>st</sup> Yr)	VIII (2 <sup>nd</sup> Yr)	IX (3 <sup>rd</sup> Yr)	X (4 <sup>th</sup> Yr)	XI (5 <sup>th</sup> Yr)	XII (6 <sup>th</sup> Yr)	XIII (7 <sup>th</sup> Yr)	XIV (8 <sup>th</sup> Yr)	XV (9 <sup>th</sup> Yr)	XVI (10 <sup>th</sup> Yr)	Total cost
	<b>2026-27</b>	<b>17103</b>	<b>65493</b>	<b>17328</b>	<b>13149</b>	<b>7447</b>	<b>7819</b>	<b>8210</b>	<b>8621</b>	<b>9052</b>	<b>9503</b>	<b>9980</b>	<b>173705</b>
<b>1</b>	<b>74.50</b>	<b>3274174</b>	<b>4879229</b>	<b>1290936</b>	<b>979600.5</b>	<b>554801.5</b>	<b>582515.5</b>	<b>611645</b>	<b>642264.5</b>	<b>674374</b>	<b>707973.5</b>	<b>743510</b>	<b>11941023</b>
<b>2</b>	<b>40.00</b>	<b>684120</b>	<b>2619720</b>	<b>693120</b>	<b>525960</b>	<b>297880</b>	<b>312760</b>	<b>328400</b>	<b>344840</b>	<b>362080</b>	<b>380120</b>	<b>399200</b>	<b>6948200</b>
<b>3</b>	<b>14.00</b>	<b>239442</b>	<b>916902</b>	<b>242592</b>	<b>184086</b>	<b>104258</b>	<b>109466</b>	<b>114940</b>	<b>120694</b>	<b>126728</b>	<b>133042</b>	<b>139720</b>	<b>2431870</b>
<b>4</b>	<b>64.30</b>	<b>2099723</b>	<b>4211200</b>	<b>1114190</b>	<b>845480.7</b>	<b>478842.1</b>	<b>502761.7</b>	<b>527903</b>	<b>554330.3</b>	<b>582043.6</b>	<b>611042.9</b>	<b>641714</b>	<b>11169232</b>
<b>5</b>	<b>50.40</b>	<b>861991.2</b>	<b>3300847</b>	<b>873331.2</b>	<b>662709.6</b>	<b>375328.8</b>	<b>394077.6</b>	<b>413784</b>	<b>434498.4</b>	<b>456220.8</b>	<b>478951.2</b>	<b>502992</b>	<b>8754732</b>
<b>6</b>	<b>37.70</b>	<b>644783.1</b>	<b>2469086</b>	<b>653265.6</b>	<b>495717.3</b>	<b>280751.9</b>	<b>294776.3</b>	<b>309517</b>	<b>325011.7</b>	<b>341260.4</b>	<b>358263.1</b>	<b>376246</b>	<b>6548679</b>
<b>Total</b>	<b>280.90</b>	<b>4804233</b>	<b>13396984</b>	<b>4867435</b>	<b>3693554</b>	<b>2091862</b>	<b>2196357</b>	<b>2306189</b>	<b>2421639</b>	<b>2542707</b>	<b>2669393</b>	<b>2803362</b>	<b>48793735</b>

## 8.2 Bamboo Twig & Thorn Fencing:

### Justification for Providing Bamboo Twig Fencing:

The selected area is in forest block. Elephant and other wildlife movement are observed. Animals like Elephant, Bear, Python, Jungal Cat, Hyena, Fox, Barking Deer, Mongoose, Snakes, Lizards, Rabbits, fowl etc are residing in and the nearby forests. As this is considered as forests all around and movement of wild animals are seen, it is proposed to provide Bamboo Twigs Fencing.

The cost norm matrix approved for bamboo twig fencing is as follows.

Cost Norm Matrix approved for bamboo twig fencing (for 1 ha / 250m)									
Sl No	Area in ha	VI	VII [0 <sup>th</sup> (25-26)]	VIII [1 <sup>st</sup> (26-27)]	IX [2 <sup>nd</sup> (27-28)]	X 3 <sup>rd</sup> (28-29)	XI [4 <sup>th</sup> (29-30)]	XII [5 <sup>th</sup> 30-31)	Total
2026-27		0	61321	10863	17575	18453	19376		127588
1	74.50	0	4568415	809293.5	1309338	1374749	1443512		9505306
2	40.00	0	2452840	434520	703000	738120	775040		5103520
3	14.00	0	858494	152082	246050	258342	271264		1786232
4	64.30	0	3942940	698490.9	1130073	1186528	1245877		8203908.4
5	50.40	0	3090578	547495.2	885780	930031.2	976550.4		6430435.2
6	37.70	0	2311802	409535.1	662577.5	695678.1	730475.2		4810067.6
<b>Total</b>	<b>280.90</b>	0	17225069	3051417	4936818	5183448	5442718		35839469.2

## 8.3 Soil & Moisture Conservation:

The area taken for Compensatory Afforestation purpose is of plain and slightly sloppy area. For better development of both natural and planted seedlings the Soil & Conservation of Moisture measures as prescribed under Model C is suggested. Under this model Soil Conservation measure structures like Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke, & WHS as per Slope will be Provided. For the selected site LBCD and contour bonding will be intensively implemented under SMC. As per the approved matrix the cost projected for the Year 2026-27 is as furnished below.

Matrix for SMC per Ha								
Sl No	Area	VI 0 <sup>th</sup> (25-26)	VII 1 <sup>st</sup> yr (26-27)	VIII 2 <sup>nd</sup> Yr (27-28)	IX 3 <sup>rd</sup> Yr (28-29)	X 4 <sup>th</sup> Yr (29-30)	XI 5 <sup>th</sup> Yr (30-31)	Total
2026-27		0	27090	4264	4480	4702	4939	45475
1	74.50	0	2018205	317668	333760	350299	367955.5	3387888
2	40.00	0	1083600	170560	179200	188080	197560	1819000
3	14.00	0	379260	59696	62720	65828	69146	636650
4	64.30	0	1741887	274175.2	288064	302338.6	317577.7	2924043

5	50.40	0	1365336	214905.6	225792	236980.8	248925.6	2291940
6	37.70	0	1021293	160752.8	168896	177265.4	186200.3	1714408
<b>Total</b>	<b>280.90</b>	<b>0</b>	<b>7609581</b>	<b>1197758</b>	<b>1258432</b>	<b>1320792</b>	<b>1387365</b>	<b>12773928</b>

For 280.90 ha the projected cost is  $280.90 \times 45475 = \text{Rs } 1,27,73,928/-$

#### 8.4 Provision for watering:

Watering Provision proposed is Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (57 nos. for 280.9 Ha) As per matrix for watering @ 602267/- x 57nos. vide Model No. W-III., the projected cost being **Rs. 3, 43, 29,219/-**

#### 8.5 Total Plantation Cost for Compensatory Afforestation ( ANR with Gap Planting @500 plants per ha

Sl no	Location	Area proposed in Ha	Silvicultural operation & Planting Cost	Fencing with Bamboo Twigs	SMC (Model C)	Total
1	Sikajore A-RF	74.50	12941023	9505306	3387888	25834217
2	Sikajore PRF	40.00	6948200	5103520	1819000	13870720
3	Tangarpali DPF	14.00	2431870	1786232	636650	4854752
4	Pandripani RF	64.30	11169232	8203908.4	2924043	22297183
5	Sidharmunda RF	50.40	8754732	6430435.2	2291940	17477107
6	Punjipahar RF	37.70	6548679	4810067.6	1714408	13073155
<b>Total</b>		<b>280.90</b>	<b>48793735</b>	<b>35839469.2</b>	<b>12773928</b>	<b>97407132</b>

**(Rupees Nine Crore Seventy Four Lakh Seven Thousand & One Hundred Thirty Two Only)**

NB: No cost escalation has been provided as the cost norm includes annual enhancement of 5% both labour & material component annually.

**PATCH NO.01- SIKAJORE-A-RF**

**9.1 Financial Outlay for the Compensatory Afforestation (For Sikajore A- RF Area 74.50 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Sikajore A- RF Area 74.50 ha)</b>		
<b>Sl No</b>	<b>Description</b>	<b>Amount in Rs</b>
<b>1</b>	Cost for ANR with Gap Planting @500 Plants per ha over 74.5 ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	12941022.50
<b>2</b>	Cost for Bamboo Twig Fencing over 74.5 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	9505306.00
<b>3</b>	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mesh LBCD, Sub Surface Dyke etc over 74.5 ha @Rs 45475/- vide SMC Model no – Annexure-11.	3387887.50
<b>4</b>	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (15 nos. for 74.5 Ha) As per matrix for watering @ 602267/- x 15 nos. vide Model no. III.	9034005.00
	<b>Total</b>	<b>3,48,68,221.00</b>

*(Rupees Three Crores, Forty eight lakhs, Sixty eight thousand, Two hundred and twenty two Only)*

**PATCH NO.02- SIKAJORE-PRF**

**9.2 Financial Outlay for the Compensatory Afforestation (For Sikajore PRF Area 40.00 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Sikajore PRF Area 40.00 ha)</b>		
<b>Sl No</b>	<b>Description</b>	<b>Amount in Rs</b>
1	Cost for ANR with Gap Planting @500 Plants per ha over 40.00ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	6948200.00
2	Cost for Bamboo Twig Fencing over 40.00 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	5103520.00
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke etc over 40.00 ha @Rs 45475/- , vide SMC Model no – Annexure-11.	1819000.00
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (08 nos. for 40 Ha) As per matrix for watering @ 602267/- x 08 nos. vide Model no. III.	4818136.00
	<b>Total</b>	<b>1,86,88,856.00</b>

***(Rupees One Crore Eight Six lakhs Eighty Eight Thousand Eight Hundred & Fifty Six Only)***

**PATCH NO.03-TANGARPALI-DPF**

**9.3 Financial Outlay for the Compensatory Afforestation (For Tangarpali DPF Area 14.00 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Tangarpali DPF Area 14.00 ha)</b>		
<b>Sl No</b>	<b>Description</b>	<b>Amount in Rs</b>
1	Cost for ANR with Gap Planting @500 Plants per ha over 14.00 ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	2431870.00
2	Cost for Bamboo Twig Fencing over 14.00 ha @ Rs 127588/- (1 ha= 126m )Vide Matrix Model – F of Annexure-F-I.	1786232.00
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mesh LBCD, Sub Surface Dyke etc over 14.00 ha @Rs 45475/-,vide SMC Model no – Annexure-11.	636650.00
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (03 nos. for 14 Ha) As per matrix for watering @ 602267/- x 03 nos. vide Model no. III.	1806801.00
	<b>Total</b>	<b>66,61,553.00</b>

***(Rupees Sixty Six Lakhs, Sixty One Thousand, Five Hundred and Fifty Three Only)***

**PATCH NO.04- PANDRIPANI RF**

**9.4 Financial Outlay for the Compensatory Afforestation (For Pandripani RF Area 64.30 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Pandripani RF Area 64.30 ha)</b>		
Sl No	Description	Amount in Rs
1	Cost for ANR with Gap Planting @500 Plants per ha over 64.30 ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	11169231.50
2	Cost for Bamboo Twig Fencing over 64.30 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	8203908.40
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke etc over 64.30ha @Rs 45475/- , vide SMC Model no – Annexure-11.	2924042.50
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (13 nos. for 64.3 Ha) As per matrix for watering @ 602267/- x 13 nos. vide Model no. III.	7829471.00
	<b>Total</b>	<b>3,01,26,653.40</b>

**(Rupees Three Crores One Lakh Twenty Six Thousand Six Hundred & Fifty three and forty paise Only)**

**PATCH NO.05- SIDHARMUNDA RF**

**9.5 Financial Outlay for the Compensatory Afforestation (For Sidharmunda RF Area 50.40 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Sidharmunda RF Area 50.40 ha)</b>		
<b>Sl No</b>	<b>Description</b>	<b>Amount in Rs</b>
1	Cost for ANR with Gap Planting @500 Plants per ha over 50.4 ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	8754732.00
2	Cost for Bamboo Twig Fencing over 50.4 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	6430435.20
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke etc over 50.4 ha @Rs 45475, vide SMC Model no – Annexure-11.	2291940.00
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (10 nos. for 50.4 Ha) As per matrix for watering @ 602267/- x 10 nos. vide Model no. III.	6022670.00
	<b>Total</b>	<b>2,34,99,777.20</b>

*(Rupees Two Crores Thirty Four Lakh Ninety Nine Thousand Seven Hundred & Seventy Seven and twenty paise Only)*

**PATCH NO.06- Punjipahar RF**

**9.6 Financial Outlay for the Compensatory Afforestation (For Punjipahar RF Area 37.70 ha)**

<b>Financial Outlay for the Compensatory Afforestation (For Punjipahar RF Area 37.70 ha)</b>		
<b>Sl No</b>	<b>Description</b>	<b>Amount in Rs</b>
1	Cost for ANR with Gap Planting @500 Plants per ha over 37.7 ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	6548678.50
2	Cost for Bamboo Twig Fencing over 37.7 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	4810067.60
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke etc over 37.7 ha @Rs 45475, vide SMC Model no – Annexure-11.	1714407.50
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (08 nos. for 37.70 Ha) As per matrix for watering @ 602267/- x 08 nos. vide Model no. III.	48,18,136.00
	<b>Total</b>	<b>1,78,91,289.60</b>

**(Rupees One Crore Seventy Eight lakh Ninety One Thousand Two Hundred & Ninety One Only)**

**9.7- FINANCIAL OUTLAY FOR THE COMPENSATORY AFFORESTATION SCHEME:**  
**Financial outlay for Compensatory Afforestation Scheme over an area of 280.90 ha of Degraded Forest Land identified in (1)Sikajore A-RF, (2)Sikajore PRF, (3)Tangarpali DPF, (4)Pandripani RF, (5)Sidharmunda RF and (6)Punjipahar RF in Sundargarh Forest Division against diversion of 134.69 ha of forest land for Kulda Extension Opencast Project of Mahanadi Coalfield Limited (MCL) in Basundhara Area of District Sundargarh under Sundargarh Forest Division as per Approved One Time Cost Norm As applicable for year 2026-27.**

SI No	Description	Amount in Rs
1	Cost for ANR with Gap Planting @500 Plants per ha over 280.90ha Degraded Forest land (DFL) @ Rs 173705/- with 10 year maintenance vide Model no. II-A of Annexure-8.	48793735.00
2	Cost for Bamboo Twig Fencing over 280.90 ha @ Rs 127588/- (1 ha= 126m ) Vide Matrix Model – F of Annexure-F-I.	35839469.00
3	Cost of SMC Staggered Trench, Percolation Pit, Contour Trench, Graded Earthen Bond, LBCD, Wire mess LBCD, Sub Surface Dyke etc over 280.90ha @Rs 45475/- vide SMC Model no – Annexure-11.	12773928.00
4	Watering Provision – Solar System with Bore Well (01 system for 05 Ha) Fitted with Drip System (57 nos. for 280.9 Ha) As per matrix for watering @ 602267/- x 57nos. vide Model no. III.	34329219.00
	<b>Total</b>	<b>13,17,36,351.00</b>

*(Rupees Thirteen crores, Seventeen lakhs, Thirty six thousand, Three Hundred and Fifty One only)*

  
 Divisional Forest Officer,  
 Sundargarh Forest Division

**File No. 8-07/2024-FC**  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Forest Conservation Division)

Indira Paryavaran Bhawan,  
Jor Bag Road, Aliganj  
New Delhi - 110003.  
**Dated:06-01-2025**

To

The Addl. Chief Secretary (Forests),  
Government of Odisha,  
Bhubaneswar

**Sub: Proposal for seeking prior approval of the Central Government under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanandi Coalfields Limited in Sundargarh District under Sundargarh Forest Division (Proposal No. FP/OR/MIN/50293/2020)**

Madam/Sir,

I am directed to refer to the Govt. of Odisha letter No. FE-DIV-FLD-0033-2024-7679/FE&CC dated 25.04.2024 and additional information submitted by the PCCF (Forest Diversion and Nodal Officer, FC Act). vide letter No. dated 20827/9F (MG)-49/2023 dated 18.10.2024 and vide letter No. 20827/9F (MG)-49/2023 dated 11.12.2024 on the proposal mentioned in above subject seeking prior approval of the Central Government in accordance with Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and to say that the proposal was considered in the Advisory Committee meeting held on 26.12.2024. After examination of the proposal the Committee deferred the proposal for want of the following information:

- i. The area proposed for CA on DFL is having MDF over 116 ha as per DSS analysis. Further, as informed by the state the area involves road, cultivated land and claims under FRA, 2006, which indicate that the area proposed for CA is neither completely suitable for plantation, nor it is free from encumbrances. The State Govt. shall therefore exclude the area which is not suitable for CA and provide alternate DFL twice in extent to the area proposed for diversion which is suitable for raising plantation and is free from all encumbrances. All requisite details with respect to the revised CA area shall be provided.
- ii. The State shall provide the status of the compliance of the conditions stipulated in the approval dated 11.03.2019 (for 29.41 ha) for Basundhara washery. The status of violations (if any) in the said project shall also be submitted.
- iii. The Regional Office shall provide the detailed site inspection report of the CA area with clear recommendations. The Regional office shall also give its comments on the status of the compliance of the conditions stipulated in the

approval dated 11.03.2019 (for 29.41 ha) for Basundhra washery and violations (if any) in the said project.

- iv. The State has informed that the DFO, Sundargarh Division vide his Memo No. 6722 Dtd 30.11.2024 has stated that as per DSS analysis, an area of 10 Ha of water bodies was not included earlier and it is clarified that an area of 929.825 ha is comprised of 4 Ha as MDF, 678 Ha as Non-Forest, 132 Ha as open forest, 105 Ha as scrub and 10 Ha Water Bodies. The possible impact of mining over 10 ha water bodies needs to be examined and state shall provide the justification along with proposed mitigation measures if any for the inclusion of 10 ha water bodies in the project.

In view of above, the State Government is requested to furnish information, as indicated above for further consideration of the proposal in the Ministry.

Signed by

Yours faithfully,

Dheeraj Mittal

(Dr. Dheeraj Mittal)

Date: 06-01-2025 13:49:42 Assistant Inspector General of Forests

**Copy to:**

1. PCCF (HoFF), Department of Forests, Government of Odisha, Bhubaneswar.
2. Dy. DGF (Central), Regional Office of the MoEF&CC at Bhubaneswar-  
**action taken with respect to the point (iii).**
3. Nodal Officer (FCA), Department of Forests, Government of Odisha, Bhubaneswar.
4. User Agency.
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi for uploading on PARIVESH portal.

# CERTIFICATE ON DSS ANALYSIS FOR CA/ACA/PCA

This is to certify that DSS Analysis of land identified for CA/ACA/PCA and subsequent

Sl. No	Name of Range	Name of the Forest Block (RF/PRF/PF/DPF/Revenue Forest)	Area identified for CA/ACA/PCA (in ha.)	Classification of identified land (in ha.)						Area suitable for plantation				Plantation Model (AR/ANR)	Remark	
				Very Dense Forest	Moderately Dense Forest	Open Forest	Non-Forest	Scrub	Water	Total	Open Forest	Non-Forest	Scrub			Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Gopalpur	Pandripani-RF	64	0	0	57	7	0	0	64	57	7	0	64	ANR @500 / ha	
2	Gopalpur	Sidarmunda-RF (Part-I)	32	0	0	32	0	0	0	32	32	0	0	32	ANR @500 / ha	
3	Gopalpur	Sidarmunda-RF (Part-II)	18	0	0	17	1	0	0	18	17	1	0	18	ANR @500 / ha	
4	Gopalpur	Punjipahar-RF	38	0	0	36	2	0	0	38	36	2	0	38	ANR @500 / ha	
5	Lephipara	Sikajore-A-RF (Part-I)	54	0	-	44	10	0	0	54	44	10	0	54	ANR @500 / ha	
6	Lephipara	Sikajore-A-RF (Part-II)	10	0	-	9	1	0	0	10	9	1	0	10	ANR @500 / ha	
7	Lephipara	Sikajore-RF	10	0	-	9	1	0	0	10	9	1	0	10	ANR @500 / ha	
8	Lephipara	Sikajore-PRF	40	0	0	23	17	0	0	40	23	17	0	40	ANR @500 / ha	
9	Ujalpur	Tangarpali-DPF	14	0	-	5	9	0	0	14	5	9	0	14	ANR @500 / ha	
<b>Total:-</b>			<b>280</b>	<b>0</b>	<b>-</b>	<b>232</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>280</b>	<b>232</b>	<b>48</b>	<b>0</b>	<b>280</b>		

Countersigned

  
 R. K. S., Rourkela Circle  
 Rourkela

  
 P. V. S.

Divisional Forest Officer  
 Sundargarh Forest Division

**Latitude / Longitude of survey points (GPS Coordinates)  
of Sikajore A RF Patch-1 (54 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 50' 41.7078" E	22° 17' 34.9687" N
2	83° 50' 41.7947" E	22° 17' 36.1162" N
3	83° 50' 41.8250" E	22° 17' 36.8089" N
4	83° 50' 42.2322" E	22° 17' 37.5400" N
5	83° 50' 42.5552" E	22° 17' 38.1865" N
6	83° 50' 42.4802" E	22° 17' 33.3909" N
7	83° 50' 43.3080" E	22° 17' 39.3329" N
8	83° 50' 44.3090" E	22° 17' 35.2417" N
9	83° 50' 44.8076" E	22° 17' 41.9457" N
10	83° 50' 44.8115" E	22° 17' 32.2295" N
11	83° 50' 46.2893" E	22° 17' 44.3487" N
12	83° 50' 47.7256" E	22° 17' 46.6760" N
13	83° 50' 48.9510" E	22° 17' 48.6089" N
14	83° 50' 49.2716" E	22° 17' 36.1180" N
15	83° 50' 49.2744" E	22° 17' 36.1822" N
16	83° 50' 49.5128" E	22° 17' 35.7975" N
17	83° 50' 49.8323" E	22° 17' 35.4777" N
18	83° 50' 49.9899" E	22° 17' 36.0370" N
19	83° 50' 50.0168" E	22° 17' 36.0515" N
20	83° 50' 50.0512" E	22° 17' 36.4836" N
21	83° 50' 50.0752" E	22° 17' 36.4969" N
22	83° 50' 50.6335" E	22° 17' 51.2875" N
23	83° 50' 50.7859" E	22° 17' 51.3593" N
24	83° 50' 50.7274" E	22° 17' 36.2803" N
25	83° 50' 50.7624" E	22° 17' 36.2878" N
26	83° 50' 51.2495" E	22° 17' 36.9731" N
27	83° 50' 51.6188" E	22° 17' 51.4448" N
28	83° 50' 51.6203" E	22° 17' 36.5567" N
29	83° 50' 52.0011" E	22° 17' 37.2167" N
30	83° 50' 52.7316" E	22° 17' 36.3742" N
31	83° 50' 53.0741" E	22° 17' 36.9983" N
32	83° 50' 53.4937" E	22° 17' 51.6709" N
33	83° 50' 53.9603" E	22° 17' 51.7380" N
34	83° 50' 53.7593" E	22° 17' 36.8203" N
35	83° 50' 54.2139" E	22° 17' 47.3496" N
36	83° 50' 54.0032" E	22° 17' 35.3961" N
37	83° 50' 54.0005" E	22° 17' 34.9887" N
38	83° 50' 54.0392" E	22° 17' 34.3627" N
39	83° 50' 54.1481" E	22° 17' 36.1351" N
40	83° 50' 54.5209" E	22° 17' 51.5682" N
41	83° 50' 54.4208" E	22° 17' 36.7009" N
42	83° 50' 54.4637" E	22° 17' 36.7354" N
43	83° 50' 54.6902" E	22° 17' 47.7199" N
44	83° 50' 54.4897" E	22° 17' 36.7529" N
45	83° 50' 54.8511" E	22° 17' 49.6290" N
46	83° 50' 54.9183" E	22° 17' 49.3990" N
47	83° 50' 54.8074" E	22° 17' 43.4852" N
48	83° 50' 54.8403" E	22° 17' 43.9773" N

49	83° 50' 54.9923" E	22° 17' 46.8020" N
50	83° 50' 54.7319" E	22° 17' 33.9524" N
51	83° 50' 55.1174" E	22° 17' 48.9698" N
52	83° 50' 55.1461" E	22° 17' 49.8785" N
53	83° 50' 54.8100" E	22° 17' 32.1872" N
54	83° 50' 55.0555" E	22° 17' 43.1462" N
55	83° 50' 55.2856" E	22° 17' 51.6155" N
56	83° 50' 54.9025" E	22° 17' 32.6351" N
57	83° 50' 55.2419" E	22° 17' 48.0619" N
58	83° 50' 55.3635" E	22° 17' 46.6838" N
59	83° 50' 55.2480" E	22° 17' 35.1004" N
60	83° 50' 55.4877" E	22° 17' 44.0142" N
61	83° 50' 55.6015" E	22° 17' 48.4285" N
62	83° 50' 55.5925" E	22° 17' 46.5605" N
63	83° 50' 55.5541" E	22° 17' 43.1222" N
64	83° 50' 55.3423" E	22° 17' 31.5045" N
65	83° 50' 55.5822" E	22° 17' 43.1094" N
66	83° 50' 55.7306" E	22° 17' 46.7285" N
67	83° 50' 55.4552" E	22° 17' 30.7691" N
68	83° 50' 55.8489" E	22° 17' 49.4227" N
69	83° 50' 55.8557" E	22° 17' 47.4031" N
70	83° 50' 55.7102" E	22° 17' 36.6988" N
71	83° 50' 55.6539" E	22° 17' 32.4821" N
72	83° 50' 55.6706" E	22° 17' 30.5980" N
73	83° 50' 56.1860" E	22° 17' 51.8273" N
74	83° 50' 56.2189" E	22° 17' 49.2109" N
75	83° 50' 56.1827" E	22° 17' 46.9786" N
76	83° 50' 55.9513" E	22° 17' 34.4563" N
77	83° 50' 56.1573" E	22° 17' 43.8250" N
78	83° 50' 56.0290" E	22° 17' 35.3337" N
79	83° 50' 55.9871" E	22° 17' 32.2443" N
80	83° 50' 55.9903" E	22° 17' 30.5651" N
81	83° 50' 56.0190" E	22° 17' 30.5657" N
82	83° 50' 56.5323" E	22° 17' 49.2101" N
83	83° 50' 56.4558" E	22° 17' 44.7936" N
84	83° 50' 56.2301" E	22° 17' 33.6636" N
85	83° 50' 56.4676" E	22° 17' 44.7636" N
86	83° 50' 56.5941" E	22° 17' 45.6089" N
87	83° 50' 56.3401" E	22° 17' 31.9105" N
88	83° 50' 56.4024" E	22° 17' 34.9752" N
89	83° 50' 56.3297" E	22° 17' 30.6291" N
90	83° 50' 56.7328" E	22° 17' 49.1151" N
91	83° 50' 56.6563" E	22° 17' 45.0417" N
92	83° 50' 56.6785" E	22° 17' 42.7793" N
93	83° 50' 56.7171" E	22° 17' 44.5171" N
94	83° 50' 56.7485" E	22° 17' 44.5076" N
95	83° 50' 56.8004" E	22° 17' 45.2711" N
96	83° 50' 56.5560" E	22° 17' 30.9601" N
97	83° 50' 56.5789" E	22° 17' 31.7176" N
98	83° 50' 56.6304" E	22° 17' 31.3939" N
99	83° 50' 56.6387" E	22° 17' 31.2959" N
100	83° 50' 56.7747" E	22° 17' 37.0102" N
101	83° 50' 57.0955" E	22° 17' 50.0686" N

102	83° 50' 57.0343" E	22° 17' 44.0342" N
103	83° 50' 57.3428" E	22° 17' 50.7909" N
104	83° 50' 57.3438" E	22° 17' 50.8144" N
105	83° 50' 57.1190" E	22° 17' 32.7310" N
106	83° 50' 57.5057" E	22° 17' 51.2213" N
107	83° 50' 57.5001" E	22° 17' 44.6951" N
108	83° 50' 57.9018" E	22° 17' 42.3879" N
109	83° 50' 58.3083" E	22° 17' 43.9285" N
110	83° 50' 58.3920" E	22° 17' 44.6997" N
111	83° 50' 58.3838" E	22° 17' 37.6151" N
112	83° 50' 58.6062" E	22° 17' 33.0552" N
113	83° 50' 58.9144" E	22° 17' 38.7700" N
114	83° 50' 59.0468" E	22° 17' 42.0091" N
115	83° 50' 59.2801" E	22° 17' 44.3656" N
116	83° 50' 59.3212" E	22° 17' 44.3557" N
117	83° 50' 59.1001" E	22° 17' 32.2669" N
118	83° 50' 59.1020" E	22° 17' 32.2810" N
119	83° 50' 59.1373" E	22° 17' 32.4531" N
120	83° 50' 59.2826" E	22° 17' 32.0462" N
121	83° 50' 59.5536" E	22° 17' 43.5453" N
122	83° 50' 59.6013" E	22° 17' 38.9048" N
123	83° 50' 59.5216" E	22° 17' 31.9976" N
124	83° 50' 59.5407" E	22° 17' 31.9985" N
125	83° 50' 59.7781" E	22° 17' 41.6874" N
126	83° 50' 59.7027" E	22° 17' 32.0980" N
127	83° 50' 59.9331" E	22° 17' 39.3917" N
128	83° 51' 00.0299" E	22° 17' 44.0233" N
129	83° 51' 00.0384" E	22° 17' 44.0040" N
130	83° 51' 00.1409" E	22° 17' 43.7774" N
131	83° 51' 00.4445" E	22° 17' 41.2665" N
132	83° 51' 00.4452" E	22° 17' 41.2662" N
133	83° 51' 00.4545" E	22° 17' 41.2929" N
134	83° 51' 00.3104" E	22° 17' 30.5129" N
135	83° 51' 00.3210" E	22° 17' 30.7612" N
136	83° 51' 00.5373" E	22° 17' 31.4082" N
137	83° 51' 00.9712" E	22° 17' 30.3361" N
138	83° 51' 01.0187" E	22° 17' 31.2657" N
139	83° 51' 01.0420" E	22° 17' 30.7811" N
140	83° 51' 01.1692" E	22° 17' 32.5311" N
141	83° 51' 01.3719" E	22° 17' 32.1637" N
142	83° 51' 01.7278" E	22° 17' 33.5922" N
143	83° 51' 02.5105" E	22° 17' 33.4298" N
144	83° 51' 03.2587" E	22° 17' 33.4410" N
145	83° 51' 03.7617" E	22° 17' 33.5940" N
146	83° 51' 03.9793" E	22° 17' 33.6923" N
147	83° 51' 04.0581" E	22° 17' 28.7296" N
148	83° 51' 04.0613" E	22° 17' 28.7708" N
149	83° 51' 04.1446" E	22° 17' 28.4815" N
150	83° 51' 04.1657" E	22° 17' 28.4420" N
151	83° 51' 04.1873" E	22° 17' 28.4107" N
152	83° 51' 04.2244" E	22° 17' 28.3720" N
153	83° 51' 04.3249" E	22° 17' 33.0849" N
154	83° 51' 04.3747" E	22° 17' 29.3068" N

155	83° 51' 04.3853" E	22° 17' 29.3323" N
156	83° 51' 04.5374" E	22° 17' 33.5301" N
157	83° 51' 04.5639" E	22° 17' 32.0713" N
158	83° 51' 04.5342" E	22° 17' 29.6646" N
159	83° 51' 04.5634" E	22° 17' 28.2000" N
160	83° 51' 04.6525" E	22° 17' 31.2469" N
161	83° 51' 04.6040" E	22° 17' 28.2010" N
162	83° 51' 04.7077" E	22° 17' 33.2977" N
163	83° 51' 04.7304" E	22° 17' 30.2182" N
164	83° 51' 04.7332" E	22° 17' 30.2431" N
165	83° 51' 04.7359" E	22° 17' 30.2680" N
166	83° 51' 04.7444" E	22° 17' 28.1578" N
167	83° 51' 04.8960" E	22° 17' 30.8209" N
168	83° 51' 05.0896" E	22° 17' 28.0805" N
169	83° 51' 05.1463" E	22° 17' 28.0815" N
170	83° 51' 05.4179" E	22° 17' 28.1616" N
171	83° 51' 05.7235" E	22° 17' 29.0050" N
172	83° 51' 05.7250" E	22° 17' 29.0147" N
173	83° 51' 05.8847" E	22° 17' 29.3270" N
174	83° 51' 06.2439" E	22° 17' 29.6368" N
175	83° 51' 06.4818" E	22° 17' 30.7190" N
176	83° 51' 06.4866" E	22° 17' 30.7478" N
177	83° 51' 06.8033" E	22° 17' 31.5981" N
178	83° 51' 06.9814" E	22° 17' 31.7439" N
179	83° 51' 07.0186" E	22° 17' 29.2407" N
180	83° 51' 07.0857" E	22° 17' 29.5210" N
181	83° 51' 07.1258" E	22° 17' 29.6032" N
182	83° 51' 07.1260" E	22° 17' 29.5616" N
183	83° 51' 07.1460" E	22° 17' 29.6445" N
184	83° 51' 07.3295" E	22° 17' 32.0631" N
185	83° 51' 07.3514" E	22° 17' 30.0241" N
186	83° 51' 07.3473" E	22° 17' 29.0252" N
187	83° 51' 07.3827" E	22° 17' 30.0676" N
188	83° 51' 07.3768" E	22° 17' 28.9827" N
189	83° 51' 07.4485" E	22° 17' 30.1532" N
190	83° 51' 07.4357" E	22° 17' 28.9493" N
191	83° 51' 07.5336" E	22° 17' 28.9033" N
192	83° 51' 07.8671" E	22° 17' 31.8627" N
193	83° 51' 07.8817" E	22° 17' 31.8465" N
194	83° 51' 07.9955" E	22° 17' 29.7985" N
195	83° 51' 08.0805" E	22° 17' 28.6491" N
196	83° 51' 08.1080" E	22° 17' 28.6182" N
197	83° 51' 08.1450" E	22° 17' 28.5870" N
198	83° 51' 08.3328" E	22° 17' 31.5327" N
199	83° 51' 08.4208" E	22° 17' 29.5668" N
200	83° 51' 08.4731" E	22° 17' 30.2841" N
201	83° 51' 08.5452" E	22° 17' 30.5603" N
202	83° 51' 08.6085" E	22° 17' 31.2517" N
203	83° 51' 08.6005" E	22° 17' 28.3813" N
204	83° 51' 08.7451" E	22° 17' 30.0722" N
205	83° 51' 08.8009" E	22° 17' 29.0923" N
206	83° 51' 08.9171" E	22° 17' 28.2831" N
207	83° 51' 09.0043" E	22° 17' 31.2471" N

208	83° 51' 09.8174" E	22° 17' 30.9394" N
209	83° 51' 10.1972" E	22° 17' 30.8542" N
210	83° 51' 10.6735" E	22° 17' 20.7326" N
211	83° 51' 11.0452" E	22° 17' 31.4118" N
212	83° 51' 11.4812" E	22° 17' 22.3353" N
213	83° 51' 12.1011" E	22° 17' 32.0128" N
214	83° 51' 12.9414" E	22° 17' 31.4675" N
215	83° 51' 12.9629" E	22° 17' 31.4291" N
216	83° 51' 12.9947" E	22° 17' 31.3722" N
217	83° 51' 13.7413" E	22° 17' 30.8542" N
218	83° 51' 13.9917" E	22° 17' 27.8281" N
219	83° 51' 14.1015" E	22° 17' 28.3215" N
220	83° 51' 14.1032" E	22° 17' 28.2889" N
221	83° 51' 14.2990" E	22° 17' 28.9142" N
222	83° 51' 14.3223" E	22° 17' 29.5974" N
223	83° 51' 14.3222" E	22° 17' 28.9681" N
224	83° 51' 14.3461" E	22° 17' 29.5147" N
225	83° 51' 14.3543" E	22° 17' 27.5565" N
226	83° 51' 14.3885" E	22° 17' 29.2304" N
227	83° 51' 14.5185" E	22° 17' 30.0221" N
228	83° 51' 14.6954" E	22° 17' 30.7928" N
229	83° 51' 14.7414" E	22° 17' 30.1349" N
230	83° 51' 15.0843" E	22° 17' 27.9601" N
231	83° 51' 15.7035" E	22° 17' 28.0462" N
232	83° 51' 15.9145" E	22° 17' 28.9305" N
233	83° 51' 16.0364" E	22° 17' 29.5798" N
234	83° 51' 16.3594" E	22° 17' 29.5955" N
235	83° 51' 16.4188" E	22° 17' 29.5308" N
236	83° 51' 16.2935" E	22° 17' 22.3324" N
237	83° 51' 16.4484" E	22° 17' 29.4986" N
238	83° 51' 16.5884" E	22° 17' 29.3756" N
239	83° 51' 16.8925" E	22° 17' 28.9525" N
240	83° 51' 17.3784" E	22° 17' 28.4141" N
241	83° 51' 18.1453" E	22° 17' 27.9164" N
242	83° 51' 18.2571" E	22° 17' 27.8546" N
243	83° 51' 18.7195" E	22° 17' 27.5761" N
244	83° 51' 19.2557" E	22° 17' 20.9575" N
245	83° 51' 19.5631" E	22° 17' 27.1188" N
246	83° 51' 19.9936" E	22° 17' 26.9534" N
247	83° 51' 20.0270" E	22° 17' 26.9526" N
248	83° 51' 20.4642" E	22° 17' 27.0713" N
249	83° 51' 20.5063" E	22° 17' 27.1224" N
250	83° 51' 20.7889" E	22° 17' 27.6265" N
251	83° 51' 20.8286" E	22° 17' 27.8644" N
252	83° 51' 22.2017" E	22° 17' 28.8947" N
253	83° 51' 22.2837" E	22° 17' 31.7977" N
254	83° 51' 22.4476" E	22° 17' 32.6341" N
255	83° 51' 22.4154" E	22° 17' 30.9434" N
256	83° 51' 22.2404" E	22° 17' 19.3713" N
257	83° 51' 22.4133" E	22° 17' 11.2080" N
258	83° 51' 22.8186" E	22° 17' 29.8644" N
259	83° 51' 22.9027" E	22° 17' 32.4725" N
260	83° 51' 22.7467" E	22° 17' 09.8830" N

261	83° 51' 22.8828" E	22° 17' 09.3610" N
262	83° 51' 23.9614" E	22° 17' 32.4633" N
263	83° 51' 23.9835" E	22° 17' 32.4636" N
264	83° 51' 24.0499" E	22° 17' 32.4645" N
265	83° 51' 24.1391" E	22° 17' 32.5020" N
266	83° 51' 25.5071" E	22° 17' 32.7142" N
267	83° 51' 25.2674" E	22° 17' 16.8938" N
268	83° 51' 26.3602" E	22° 17' 08.1747" N
269	83° 51' 27.3621" E	22° 17' 33.3248" N
270	83° 51' 27.3796" E	22° 17' 33.2853" N
271	83° 51' 27.0296" E	22° 17' 14.9272" N
272	83° 51' 27.1671" E	22° 17' 08.5463" N
273	83° 51' 28.0993" E	22° 17' 15.2853" N
274	83° 51' 28.5001" E	22° 17' 33.4896" N
275	83° 51' 28.0974" E	22° 17' 12.1858" N
276	83° 51' 28.9218" E	22° 17' 33.6956" N
277	83° 51' 28.8735" E	22° 17' 17.4974" N
278	83° 51' 29.3261" E	22° 17' 26.7249" N
279	83° 51' 29.3307" E	22° 17' 26.5911" N
280	83° 51' 29.3439" E	22° 17' 26.5790" N
281	83° 51' 29.3739" E	22° 17' 26.2217" N
282	83° 51' 29.3932" E	22° 17' 27.0336" N
283	83° 51' 29.4179" E	22° 17' 27.0711" N
284	83° 51' 29.4086" E	22° 17' 26.1605" N
285	83° 51' 29.4690" E	22° 17' 27.0964" N
286	83° 51' 29.5283" E	22° 17' 25.9599" N
287	83° 51' 29.5799" E	22° 17' 25.9129" N
288	83° 51' 29.8839" E	22° 17' 25.7379" N
289	83° 51' 29.9214" E	22° 17' 25.7265" N
290	83° 51' 29.9620" E	22° 17' 27.1242" N
291	83° 51' 29.9713" E	22° 17' 25.7152" N
292	83° 51' 30.0338" E	22° 17' 25.6923" N
293	83° 51' 30.0645" E	22° 17' 27.1744" N
294	83° 51' 29.7521" E	22° 17' 09.4123" N
295	83° 51' 30.2538" E	22° 17' 33.5407" N
296	83° 51' 30.1999" E	22° 17' 25.6418" N
297	83° 51' 30.0059" E	22° 17' 12.1861" N
298	83° 51' 30.3326" E	22° 17' 25.5903" N
299	83° 51' 30.4195" E	22° 17' 25.5682" N
300	83° 51' 30.5024" E	22° 17' 27.5964" N
301	83° 51' 30.6016" E	22° 17' 27.7304" N
302	83° 51' 30.3435" E	22° 17' 14.4935" N
303	83° 51' 30.4174" E	22° 17' 17.9457" N
304	83° 51' 30.6283" E	22° 17' 27.7818" N
305	83° 51' 30.6550" E	22° 17' 27.8204" N
306	83° 51' 30.6304" E	22° 17' 25.6048" N
307	83° 51' 30.4970" E	22° 17' 17.9755" N
308	83° 51' 30.6680" E	22° 17' 25.6513" N
309	83° 51' 30.7054" E	22° 17' 25.6632" N
310	83° 51' 30.9521" E	22° 17' 28.2244" N
311	83° 51' 30.9793" E	22° 17' 28.2507" N
312	83° 51' 31.3629" E	22° 17' 33.5594" N
313	83° 51' 31.4014" E	22° 17' 33.6008" N

314	83° 51' 31.2492" E	22° 17' 25.9810" N
315	83° 51' 31.4142" E	22° 17' 33.6146" N
316	83° 51' 31.3005" E	22° 17' 26.0165" N
317	83° 51' 30.9807" E	22° 17' 09.7483" N
318	83° 51' 31.3264" E	22° 17' 26.0401" N
319	83° 51' 31.4025" E	22° 17' 29.0633" N
320	83° 51' 31.4176" E	22° 17' 29.1188" N
321	83° 51' 31.4607" E	22° 17' 29.1887" N
322	83° 51' 31.3475" E	22° 17' 18.4991" N
323	83° 51' 31.7629" E	22° 17' 29.5605" N
324	83° 51' 32.0399" E	22° 17' 26.4888" N
325	83° 51' 31.9460" E	22° 17' 19.3256" N
326	83° 51' 31.9629" E	22° 17' 19.3423" N
327	83° 51' 31.9957" E	22° 17' 12.8658" N
328	83° 51' 32.2062" E	22° 17' 10.2671" N
329	83° 51' 32.4714" E	22° 17' 19.8136" N
330	83° 51' 32.7953" E	22° 17' 30.2971" N
331	83° 51' 33.0230" E	22° 17' 33.9062" N
332	83° 51' 33.0678" E	22° 17' 26.5898" N
333	83° 51' 33.1733" E	22° 17' 30.9074" N
334	83° 51' 33.1891" E	22° 17' 30.9660" N
335	83° 51' 33.3258" E	22° 17' 33.6723" N
336	83° 51' 33.3952" E	22° 17' 31.3680" N
337	83° 51' 33.3979" E	22° 17' 31.4040" N
338	83° 51' 33.5302" E	22° 17' 32.0184" N
339	83° 51' 33.5454" E	22° 17' 32.0561" N
340	83° 51' 33.3467" E	22° 17' 20.4140" N
341	83° 51' 33.6653" E	22° 17' 32.9293" N
342	83° 51' 33.9971" E	22° 17' 26.8531" N
343	83° 51' 34.5951" E	22° 17' 21.5149" N
344	83° 51' 34.5590" E	22° 17' 11.0148" N
345	83° 51' 34.8415" E	22° 17' 22.0662" N
346	83° 51' 34.8452" E	22° 17' 22.1137" N
347	83° 51' 34.8661" E	22° 17' 22.1775" N
348	83° 51' 34.9041" E	22° 17' 22.2576" N
349	83° 51' 35.0116" E	22° 17' 27.1034" N
350	83° 51' 35.0394" E	22° 17' 27.1160" N
351	83° 51' 34.9012" E	22° 17' 12.9041" N
352	83° 51' 35.3239" E	22° 17' 27.0934" N
353	83° 51' 35.2579" E	22° 17' 23.1588" N
354	83° 51' 35.1779" E	22° 17' 11.3009" N
355	83° 51' 35.8372" E	22° 17' 24.3460" N
356	83° 51' 35.8540" E	22° 17' 24.3737" N
357	83° 51' 36.6421" E	22° 17' 25.5610" N
358	83° 51' 36.7244" E	22° 17' 26.0699" N
359	83° 50' 50.0259" E	22° 17' 35.8870" N
360	83° 50' 50.5318" E	22° 17' 36.1015" N
361	83° 50' 51.3552" E	22° 17' 35.7011" N
362	83° 50' 52.2662" E	22° 17' 34.9621" N
363	83° 50' 53.7334" E	22° 17' 32.8983" N
364	83° 50' 54.3907" E	22° 17' 31.7378" N
365	83° 50' 54.8337" E	22° 17' 25.9257" N
366	83° 50' 55.0541" E	22° 17' 26.4683" N

367	83° 50' 55.1589" E	22° 17' 30.2322" N
368	83° 50' 55.8812" E	22° 17' 24.8068" N
369	83° 50' 56.6943" E	22° 17' 30.3261" N
370	83° 50' 57.0198" E	22° 17' 24.0057" N
371	83° 50' 57.1841" E	22° 17' 26.9165" N
372	83° 50' 58.3311" E	22° 17' 26.5968" N
373	83° 50' 58.4151" E	22° 17' 30.7363" N
374	83° 50' 58.7358" E	22° 17' 22.7289" N
375	83° 50' 59.3369" E	22° 17' 24.5620" N
376	83° 50' 59.9013" E	22° 17' 22.1410" N
377	83° 51' 00.5753" E	22° 17' 22.7240" N
378	83° 51' 01.0283" E	22° 17' 28.4478" N
379	83° 51' 01.0050" E	22° 17' 21.2692" N
380	83° 51' 01.6814" E	22° 17' 20.5559" N
381	83° 51' 02.3489" E	22° 17' 20.3953" N
382	83° 51' 02.6375" E	22° 17' 27.7535" N
383	83° 51' 02.7789" E	22° 17' 23.4179" N
384	83° 51' 03.0454" E	22° 17' 21.0520" N
385	83° 51' 03.9185" E	22° 17' 24.4642" N
386	83° 51' 05.0472" E	22° 17' 23.1720" N
387	83° 51' 05.1288" E	22° 17' 26.5671" N
388	83° 51' 07.8067" E	22° 17' 21.7495" N
389	83° 51' 09.5662" E	22° 17' 21.1476" N
390	83° 51' 10.6735" E	22° 17' 20.7326" N
391	83° 51' 11.4812" E	22° 17' 22.3353" N
392	83° 51' 16.2935" E	22° 17' 22.3324" N
393	83° 51' 19.2557" E	22° 17' 20.9575" N
394	83° 51' 22.2404" E	22° 17' 19.3713" N
395	83° 51' 22.4133" E	22° 17' 11.2080" N
396	83° 51' 22.7467" E	22° 17' 09.8830" N
397	83° 51' 22.8828" E	22° 17' 09.3610" N
398	83° 51' 25.2674" E	22° 17' 16.8938" N
399	83° 51' 26.3602" E	22° 17' 08.1747" N
400	83° 51' 27.0296" E	22° 17' 14.9272" N
401	83° 51' 27.1671" E	22° 17' 08.5463" N
402	83° 51' 29.7521" E	22° 17' 09.4123" N
403	83° 51' 30.9807" E	22° 17' 09.7483" N
404	83° 51' 32.2062" E	22° 17' 10.2671" N
405	83° 51' 34.5590" E	22° 17' 11.0148" N
406	83° 51' 35.1778" E	22° 17' 11.3009" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Sikajore A RF Patch-2 (10 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 51' 58.9558" E	22° 17' 07.1504" N
2	83° 51' 56.1311" E	22° 17' 08.1785" N
3	83° 51' 55.3585" E	22° 17' 08.8480" N
4	83° 51' 56.2327" E	22° 17' 10.0172" N
5	83° 51' 52.5169" E	22° 17' 10.6557" N
6	83° 51' 51.0920" E	22° 17' 08.5462" N
7	83° 51' 47.0201" E	22° 17' 08.3015" N
8	83° 51' 44.2139" E	22° 17' 08.3868" N
9	83° 51' 41.9153" E	22° 17' 10.6161" N
10	83° 51' 38.9231" E	22° 17' 11.1117" N
11	83° 51' 36.2255" E	22° 17' 09.8406" N
12	83° 51' 31.3657" E	22° 17' 09.3057" N
13	83° 51' 31.2198" E	22° 17' 06.8172" N
14	83° 51' 33.4403" E	22° 17' 05.8180" N
15	83° 51' 41.0724" E	22° 17' 04.3046" N
16	83° 51' 46.3457" E	22° 17' 04.8274" N
17	83° 51' 52.3900" E	22° 17' 05.8181" N
18	83° 51' 56.9558" E	22° 17' 05.3090" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Sikajore A RF Patch-3 (10.5 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 50' 41.0775" E	22° 17' 44.3255" N
2	83° 50' 41.0775" E	22° 17' 44.3255" N
3	83° 50' 47.5160" E	22° 17' 47.4586" N
4	83° 50' 41.6452" E	22° 17' 37.3489" N
5	83° 50' 41.1538" E	22° 17' 34.2821" N
6	83° 50' 42.5687" E	22° 17' 31.7796" N
7	83° 50' 40.7177" E	22° 17' 32.9184" N
8	83° 50' 40.1192" E	22° 17' 34.8456" N
9	83° 50' 38.6770" E	22° 17' 35.3801" N
10	83° 50' 37.0049" E	22° 17' 34.7960" N
11	83° 50' 35.9759" E	22° 17' 37.0875" N
12	83° 50' 34.7539" E	22° 17' 35.5441" N
13	83° 50' 33.9438" E	22° 17' 37.3671" N
14	83° 50' 31.7771" E	22° 17' 37.6396" N
15	83° 50' 29.0545" E	22° 17' 37.6166" N
16	83° 50' 28.5046" E	22° 17' 35.7606" N
17	83° 50' 23.4131" E	22° 17' 34.1733" N
18	83° 50' 19.9219" E	22° 17' 37.5305" N
19	83° 50' 15.5956" E	22° 17' 36.9282" N
20	83° 50' 15.4180" E	22° 17' 38.6036" N
21	83° 50' 16.7234" E	22° 17' 38.7320" N
22	83° 50' 18.4208" E	22° 17' 41.5228" N
23	83° 50' 21.3166" E	22° 17' 41.0574" N
24	83° 50' 23.8276" E	22° 17' 39.4030" N
25	83° 50' 28.2692" E	22° 17' 38.6894" N
26	83° 50' 32.2829" E	22° 17' 38.7727" N
27	83° 50' 35.1751" E	22° 17' 39.0898" N
28	83° 50' 38.3548" E	22° 17' 39.9766" N
29	83° 50' 40.5386" E	22° 17' 41.1433" N
30	83° 50' 40.4948" E	22° 17' 42.5850" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Sikajore PRF (40 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 52' 52.3715" E	22° 20' 07.6249" N
2	83° 52' 52.8877" E	22° 20' 02.1212" N
3	83° 52' 53.4608" E	22° 20' 09.0081" N
4	83° 52' 55.2677" E	22° 20' 10.5053" N
5	83° 52' 57.9330" E	22° 20' 06.0673" N
6	83° 52' 57.9503" E	22° 20' 05.8934" N
7	83° 52' 58.3720" E	22° 20' 04.3074" N
8	83° 52' 58.9502" E	22° 20' 03.2600" N
9	83° 52' 58.8336" E	22° 19' 51.1276" N
10	83° 52' 59.1199" E	22° 20' 03.0821" N
11	83° 52' 59.2742" E	22° 20' 03.0289" N
12	83° 52' 59.4772" E	22° 20' 02.9785" N
13	83° 52' 59.9994" E	22° 19' 48.9909" N
14	83° 53' 00.2289" E	22° 19' 52.2832" N
15	83° 53' 00.6762" E	22° 20' 11.2613" N
16	83° 53' 00.8294" E	22° 19' 53.0232" N
17	83° 53' 01.0255" E	22° 19' 58.3737" N
18	83° 53' 01.5480" E	22° 20' 00.9519" N
19	83° 53' 01.4384" E	22° 19' 50.9619" N
20	83° 53' 01.8979" E	22° 20' 06.5841" N
21	83° 53' 02.1025" E	22° 20' 06.5943" N
22	83° 53' 01.9651" E	22° 19' 52.5552" N
23	83° 53' 02.1112" E	22° 19' 50.7834" N
24	83° 53' 02.4418" E	22° 20' 03.0197" N
25	83° 53' 02.3438" E	22° 19' 57.4870" N
26	83° 53' 02.6426" E	22° 20' 02.9775" N
27	83° 53' 02.9414" E	22° 20' 02.9444" N
28	83° 53' 03.2432" E	22° 20' 11.4232" N
29	83° 53' 02.7618" E	22° 19' 45.9406" N
30	83° 53' 03.3587" E	22° 19' 51.6775" N
31	83° 53' 03.9827" E	22° 20' 06.5680" N
32	83° 53' 04.8055" E	22° 20' 10.9866" N
33	83° 53' 04.8068" E	22° 20' 02.4369" N
34	83° 53' 04.9653" E	22° 20' 02.2694" N
35	83° 53' 05.4312" E	22° 20' 04.4081" N
36	83° 53' 05.6754" E	22° 19' 56.0761" N
37	83° 53' 05.6465" E	22° 19' 50.8998" N
38	83° 53' 05.7428" E	22° 19' 49.7432" N
39	83° 53' 06.2189" E	22° 19' 49.7278" N
40	83° 53' 06.6248" E	22° 19' 50.9654" N
41	83° 53' 06.9318" E	22° 20' 04.3886" N
42	83° 53' 06.6687" E	22° 19' 49.6502" N
43	83° 53' 07.1853" E	22° 20' 09.5164" N
44	83° 53' 07.2129" E	22° 19' 49.6236" N
45	83° 53' 07.6104" E	22° 20' 03.8691" N
46	83° 53' 07.5113" E	22° 19' 49.5568" N
47	83° 53' 07.7794" E	22° 19' 40.5096" N
48	83° 53' 08.0188" E	22° 19' 49.4967" N

49	83° 53' 08.1984" E	22° 19' 51.0645" N
50	83° 53' 08.7771" E	22° 20' 02.2869" N
51	83° 53' 08.9421" E	22° 20' 09.0183" N
52	83° 53' 08.9807" E	22° 19' 49.4548" N
53	83° 53' 09.3955" E	22° 19' 56.0112" N
54	83° 53' 09.6202" E	22° 19' 59.7295" N
55	83° 53' 09.5178" E	22° 19' 51.6009" N
56	83° 53' 09.6733" E	22° 19' 49.4124" N
57	83° 53' 10.4111" E	22° 20' 07.4348" N
58	83° 53' 10.3746" E	22° 19' 58.8949" N
59	83° 53' 11.2565" E	22° 19' 57.8285" N
60	83° 53' 11.3045" E	22° 19' 57.7247" N
61	83° 53' 11.5674" E	22° 20' 04.5151" N
62	83° 53' 11.4482" E	22° 19' 57.5164" N
63	83° 53' 11.9986" E	22° 20' 03.9626" N
64	83° 53' 11.9109" E	22° 19' 49.4207" N
65	83° 53' 12.2250" E	22° 19' 48.9190" N
66	83° 53' 12.2822" E	22° 19' 48.4778" N
67	83° 53' 12.7685" E	22° 20' 03.4174" N
68	83° 53' 12.5176" E	22° 19' 48.2410" N
69	83° 53' 12.6171" E	22° 19' 52.1787" N
70	83° 53' 12.5616" E	22° 19' 48.2415" N
71	83° 53' 12.8675" E	22° 19' 48.1546" N
72	83° 53' 14.1230" E	22° 19' 50.8695" N
73	83° 53' 14.4972" E	22° 20' 02.7917" N
74	83° 53' 15.2507" E	22° 19' 54.0427" N
75	83° 53' 15.4308" E	22° 19' 53.8951" N
76	83° 53' 15.3984" E	22° 19' 47.7027" N
77	83° 53' 15.7605" E	22° 20' 01.1678" N
78	83° 53' 15.5260" E	22° 19' 47.6166" N
79	83° 53' 15.7496" E	22° 19' 53.7482" N
80	83° 53' 15.7832" E	22° 19' 47.4899" N
81	83° 53' 15.9128" E	22° 19' 47.4492" N
82	83° 53' 16.2399" E	22° 20' 00.6488" N
83	83° 53' 16.1647" E	22° 19' 47.2354" N
84	83° 53' 17.7574" E	22° 19' 59.7562" N
85	83° 53' 19.1946" E	22° 19' 44.9768" N
86	83° 53' 19.7882" E	22° 19' 59.1200" N
87	83° 53' 19.9247" E	22° 19' 49.4133" N
88	83° 53' 20.1364" E	22° 19' 49.2802" N
89	83° 53' 20.3455" E	22° 19' 49.1063" N
90	83° 53' 20.8303" E	22° 19' 58.5293" N
91	83° 53' 21.9554" E	22° 19' 57.6247" N
92	83° 53' 23.2604" E	22° 19' 55.5443" N
93	83° 53' 24.1026" E	22° 19' 55.0405" N
94	83° 53' 24.9032" E	22° 19' 50.0580" N
95	83° 53' 25.5089" E	22° 19' 50.1888" N
96	83° 53' 25.8015" E	22° 19' 54.4172" N
97	83° 53' 27.6531" E	22° 19' 53.6526" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Tangarpali DPF (14 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 56' 51.2872" E	22° 04' 21.8700" N
2	83° 56' 52.6141" E	22° 04' 26.6931" N
3	83° 56' 50.7596" E	22° 04' 29.0514" N
4	83° 56' 46.2777" E	22° 04' 31.1812" N
5	83° 56' 41.4063" E	22° 04' 31.6791" N
6	83° 56' 40.5939" E	22° 04' 22.4946" N
7	83° 56' 40.8339" E	22° 04' 20.9049" N
8	83° 56' 41.7139" E	22° 04' 19.7483" N
9	83° 56' 43.3412" E	22° 04' 17.1952" N
10	83° 56' 45.3438" E	22° 04' 15.2732" N
11	83° 56' 47.1007" E	22° 04' 13.4541" N
12	83° 56' 48.4408" E	22° 04' 13.1219" N
13	83° 56' 49.9935" E	22° 04' 12.8690" N
14	83° 56' 50.7320" E	22° 04' 14.9765" N
15	83° 56' 50.7414" E	22° 04' 17.7146" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Pandripani RF (64.30Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 44' 53.7096" E	22° 03' 21.1268" N
2	83° 44' 52.5108" E	22° 03' 19.3370" N
3	83° 44' 51.8717" E	22° 03' 18.4751" N
4	83° 45' 05.4890" E	22° 03' 10.4306" N
5	83° 45' 07.6939" E	22° 03' 12.3572" N
6	83° 45' 09.9916" E	22° 03' 10.0287" N
7	83° 45' 07.9606" E	22° 03' 08.0170" N
8	83° 45' 14.5241" E	22° 02' 56.9398" N
9	83° 45' 15.7358" E	22° 02' 54.4342" N
10	83° 45' 16.2752" E	22° 02' 53.4113" N
11	83° 45' 19.8477" E	22° 02' 53.8229" N
12	83° 45' 25.9711" E	22° 02' 51.2062" N
13	83° 45' 29.9228" E	22° 02' 53.3311" N
14	83° 45' 28.8353" E	22° 02' 56.3733" N
15	83° 45' 29.1714" E	22° 02' 57.7968" N
16	83° 45' 31.1548" E	22° 03' 08.0158" N
17	83° 45' 25.4132" E	22° 03' 08.5094" N
18	83° 45' 19.5647" E	22° 03' 21.0585" N
19	83° 45' 17.1724" E	22° 03' 25.2330" N
20	83° 45' 14.3181" E	22° 03' 26.0067" N
21	83° 45' 11.2264" E	22° 03' 28.3780" N
22	83° 45' 06.5567" E	22° 03' 32.7784" N
23	83° 45' 05.9032" E	22° 03' 31.5078" N
24	83° 45' 04.9127" E	22° 03' 28.9053" N
25	83° 45' 03.2624" E	22° 03' 27.0716" N
26	83° 44' 57.6008" E	22° 03' 26.5846" N
27	83° 44' 54.9956" E	22° 03' 26.8629" N

**Latitude / Longitude of survey points (GPS Coordinates)  
of Sikajore PRF (40 Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 52' 52.3715" E	22° 20' 07.6249" N
2	83° 52' 52.8877" E	22° 20' 02.1212" N
3	83° 52' 53.4608" E	22° 20' 09.0081" N
4	83° 52' 55.2677" E	22° 20' 10.5053" N
5	83° 52' 57.9330" E	22° 20' 06.0673" N
6	83° 52' 57.9503" E	22° 20' 05.8934" N
7	83° 52' 58.3720" E	22° 20' 04.3074" N
8	83° 52' 58.9502" E	22° 20' 03.2600" N
9	83° 52' 58.8336" E	22° 19' 51.1276" N
10	83° 52' 59.1199" E	22° 20' 03.0821" N
11	83° 52' 59.2742" E	22° 20' 03.0289" N
12	83° 52' 59.4772" E	22° 20' 02.9785" N
13	83° 52' 59.9994" E	22° 19' 48.9909" N
14	83° 53' 00.2289" E	22° 19' 52.2832" N
15	83° 53' 00.6762" E	22° 20' 11.2613" N
16	83° 53' 00.8294" E	22° 19' 53.0232" N
17	83° 53' 01.0255" E	22° 19' 58.3737" N
18	83° 53' 01.5480" E	22° 20' 00.9519" N
19	83° 53' 01.4384" E	22° 19' 50.9619" N
20	83° 53' 01.8979" E	22° 20' 06.5841" N
21	83° 53' 02.1025" E	22° 20' 06.5943" N
22	83° 53' 01.9651" E	22° 19' 52.5552" N
23	83° 53' 02.1112" E	22° 19' 50.7834" N
24	83° 53' 02.4418" E	22° 20' 03.0197" N
25	83° 53' 02.3438" E	22° 19' 57.4870" N
26	83° 53' 02.6426" E	22° 20' 02.9775" N
27	83° 53' 02.9414" E	22° 20' 02.9444" N
28	83° 53' 03.2432" E	22° 20' 11.4232" N
29	83° 53' 02.7618" E	22° 19' 45.9406" N
30	83° 53' 03.3587" E	22° 19' 51.6775" N
31	83° 53' 03.9827" E	22° 20' 06.5680" N
32	83° 53' 04.8055" E	22° 20' 10.9866" N
33	83° 53' 04.8068" E	22° 20' 02.4369" N
34	83° 53' 04.9653" E	22° 20' 02.2694" N
35	83° 53' 05.4312" E	22° 20' 04.4081" N
36	83° 53' 05.6754" E	22° 19' 56.0761" N
37	83° 53' 05.6465" E	22° 19' 50.8998" N
38	83° 53' 05.7428" E	22° 19' 49.7432" N
39	83° 53' 06.2189" E	22° 19' 49.7278" N
40	83° 53' 06.6248" E	22° 19' 50.9654" N
41	83° 53' 06.9318" E	22° 20' 04.3886" N
42	83° 53' 06.6687" E	22° 19' 49.6502" N
43	83° 53' 07.1853" E	22° 20' 09.5164" N
44	83° 53' 07.2129" E	22° 19' 49.6236" N
45	83° 53' 07.6104" E	22° 20' 03.8691" N
46	83° 53' 07.5113" E	22° 19' 49.5568" N
47	83° 53' 07.7794" E	22° 19' 40.5096" N
48	83° 53' 08.0188" E	22° 19' 49.4967" N

14	83° 46' 19.6815" E	22° 01' 38.7021" N
15	83° 46' 16.3798" E	22° 01' 38.3840" N
16	83° 46' 12.0284" E	22° 01' 42.7626" N
17	83° 46' 08.1370" E	22° 01' 44.2251" N
18	83° 46' 07.4059" E	22° 01' 47.8968" N
19	83° 46' 07.8461" E	22° 01' 50.6772" N
20	83° 46' 11.5661" E	22° 01' 51.5104" N
21	83° 46' 11.2229" E	22° 01' 52.8151" N
22	83° 46' 05.9986" E	22° 01' 51.4565" N
23	83° 46' 01.7755" E	22° 01' 49.2229" N
24	83° 45' 55.9360" E	22° 01' 46.4844" N

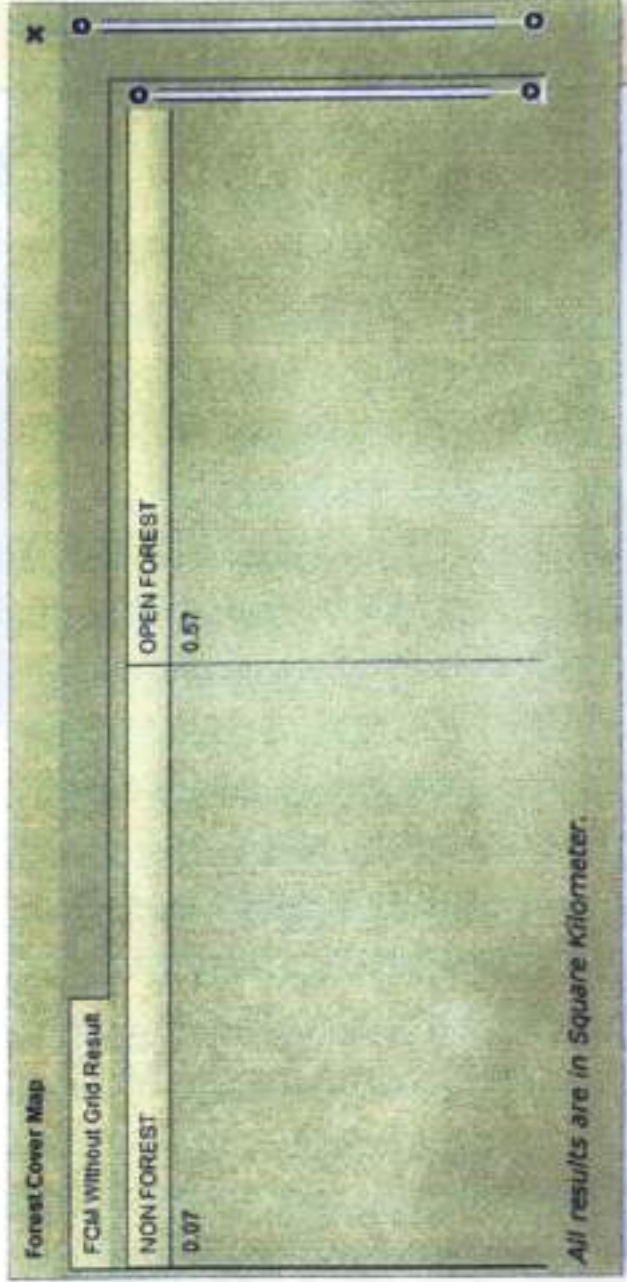
**Latitude / Longitude of survey points (GPS Coordinates)  
of Punjipahar RF (37.70Ha)**

POINT SL.NO.	LONGITUDE	LATITUDE
1	83° 49' 25.2532" E	22° 01' 45.7317" N
2	83° 49' 24.0556" E	22° 01' 44.1900" N
3	83° 49' 22.1838" E	22° 01' 42.8062" N
4	83° 49' 20.8846" E	22° 01' 41.9471" N
5	83° 49' 19.9726" E	22° 01' 41.4490" N
6	83° 49' 21.3491" E	22° 01' 39.1776" N
7	83° 49' 23.6013" E	22° 01' 35.5610" N
8	83° 49' 28.7142" E	22° 01' 30.7947" N
9	83° 49' 33.9866" E	22° 01' 23.3976" N
10	83° 49' 37.2102" E	22° 01' 20.9034" N
11	83° 49' 37.6229" E	22° 01' 17.2771" N
12	83° 49' 40.1439" E	22° 01' 14.1047" N
13	83° 49' 46.7028" E	22° 01' 11.0389" N
14	83° 49' 49.9944" E	22° 01' 08.4885" N
15	83° 49' 51.0672" E	22° 01' 07.9998" N
16	83° 49' 56.3577" E	22° 01' 04.0280" N
17	83° 49' 57.2275" E	22° 01' 08.2872" N
18	83° 49' 52.8619" E	22° 01' 14.1948" N
19	83° 49' 51.4591" E	22° 01' 16.0253" N
20	83° 49' 49.2146" E	22° 01' 17.5888" N
21	83° 49' 48.4968" E	22° 01' 20.3148" N
22	83° 49' 43.8675" E	22° 01' 26.5738" N
23	83° 49' 41.4867" E	22° 01' 28.9750" N
24	83° 49' 39.2788" E	22° 01' 33.1600" N
25	83° 49' 31.2185" E	22° 01' 40.4948" N
26	83° 49' 29.4106" E	22° 01' 45.4719" N
27	83° 49' 28.4426" E	22° 01' 45.4947" N
28	83° 49' 27.6348" E	22° 01' 45.6119" N
29	83° 49' 26.9346" E	22° 01' 45.6201" N
30	83° 49' 26.2258" E	22° 01' 45.7667" N

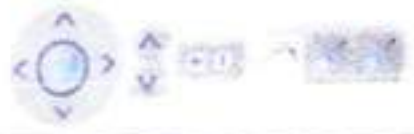
# Pandipani R.F. - Gopalpur Range



Draw and Measure



# Sidamunda R.F. - Gopeppan Ranga



Draw and Measure

**FOREST COVER MAP**

**FCM LEGEND**

- VERY DENSE FOREST
- MODERATELY DENSE FOREST
- OPEN FOREST
- SCRUB
- NON FOREST
- WATER



Lat : 22.036 Long : 83.772

Scale: 1:6432



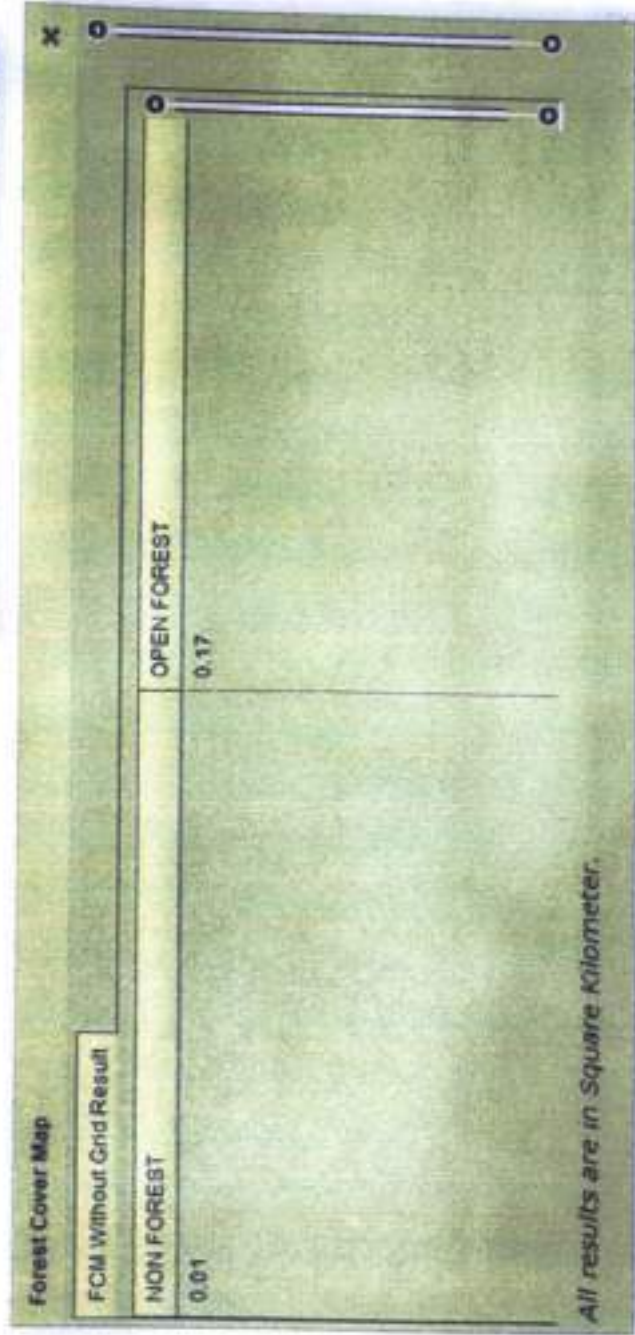
**Forest Cover Map**

FCM Without Gnd Result

NON FOREST	0.00
OPEN FOREST	0.32

All results are in Square Kilometer.

# Sidaramunda R.F. - Gopipati Rangan



ORISSA

Lat : 22.028 Long : 85.778

Scale: 1:10107



# Pungipahar R.F. - Copijn Range



Lat : 22.033 Long : 83.825

Scale : 1:14368



Sikayone 'A' RF - Lephipasa Range



**FOREST COVER MAP**

FCM LEGEND

- VERY DENSE FOREST
- MODERATELY DENSE FOREST
- OPEN FOREST
- SCRUB
- NON FOREST
- WATER



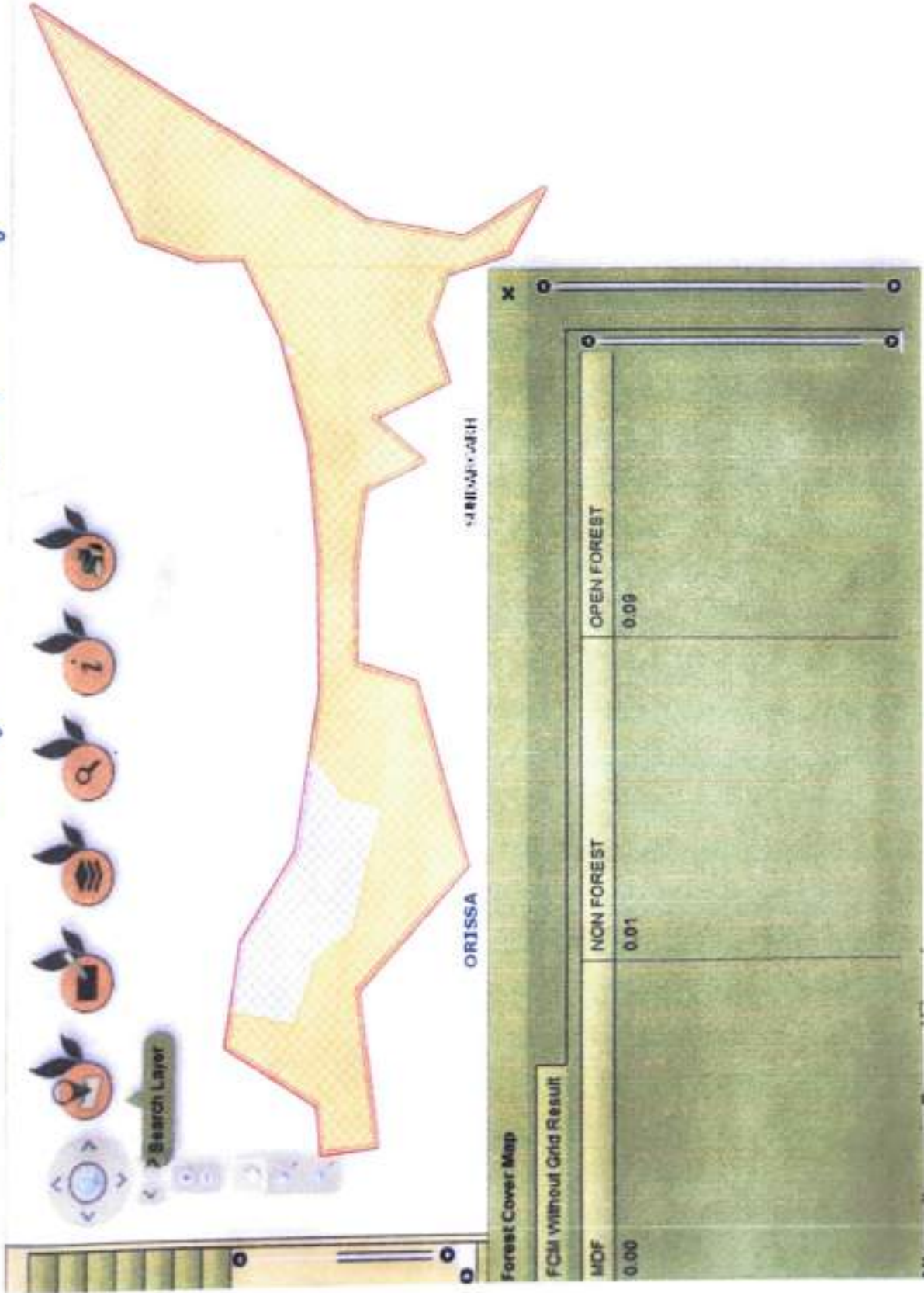
Lat : 22.295 Long : 83.867

Scale: 1:22285

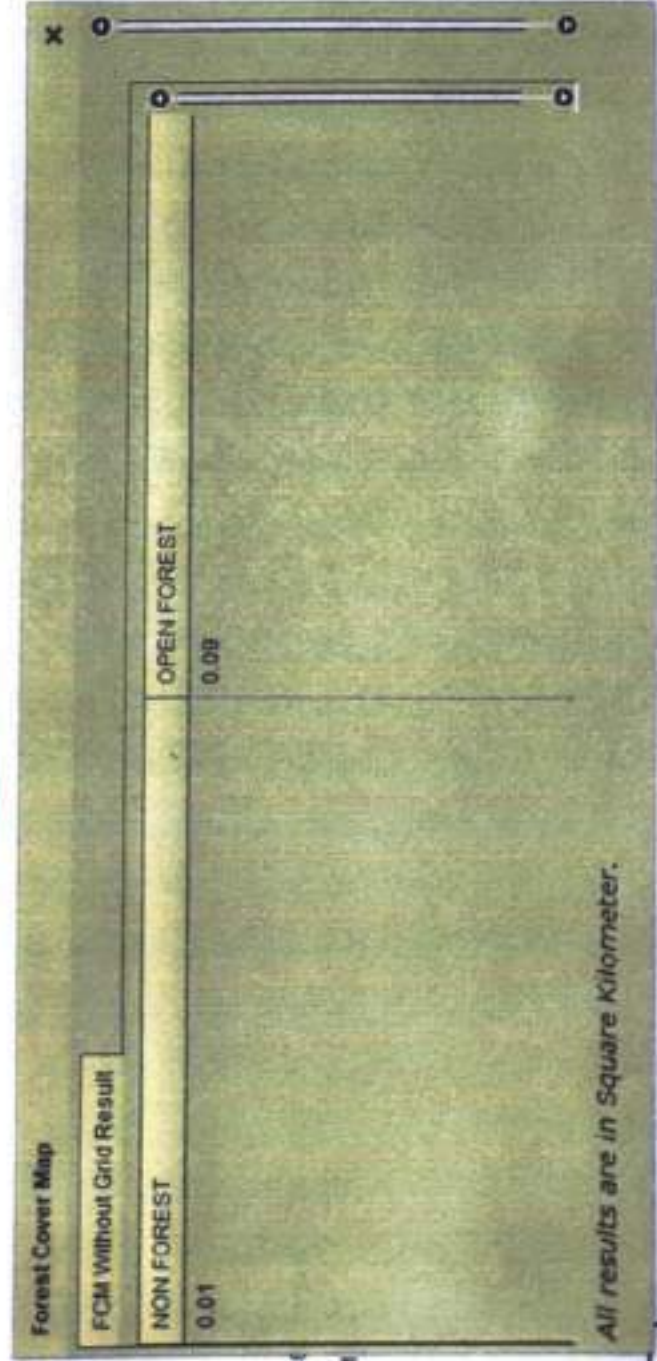


All results are in Square Kilometer.

# Sikayore N.R.F. - Lephipade Range



# Sikayore R.F. Lephpada Range



Lat : 22.286

Scale: 1:41

500 m



# Sikharjore PRF - Lophurjola Range



Draw and Measure

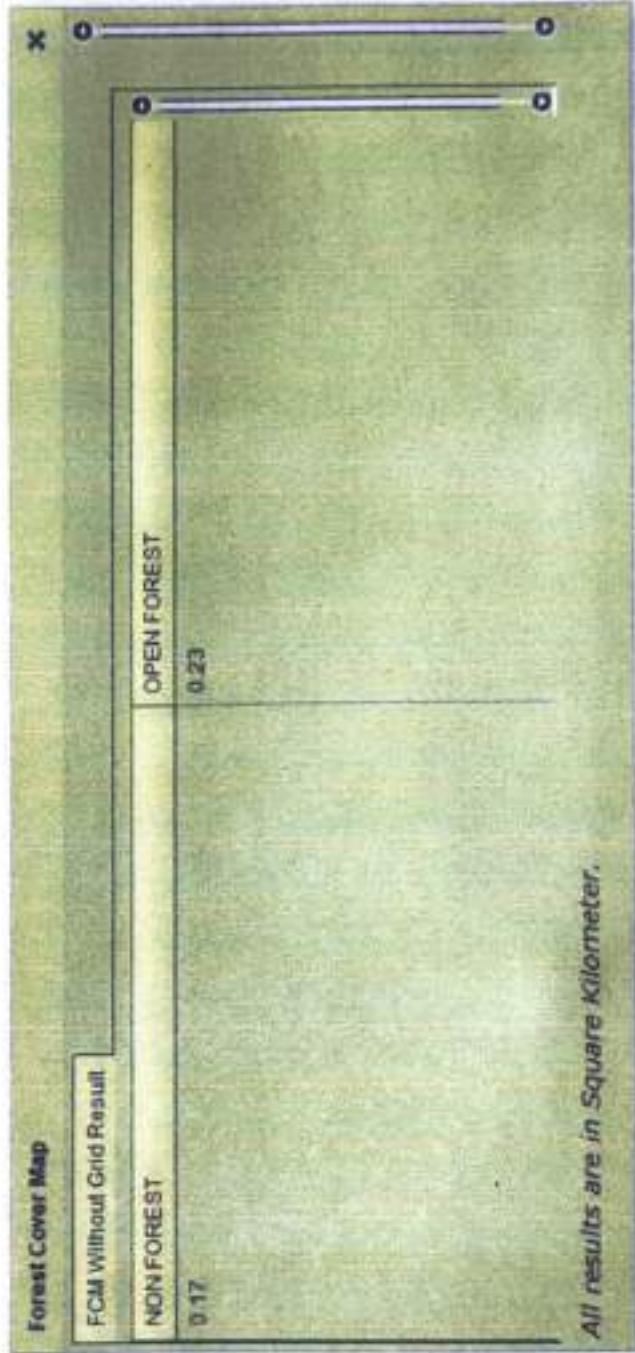


ORISSA

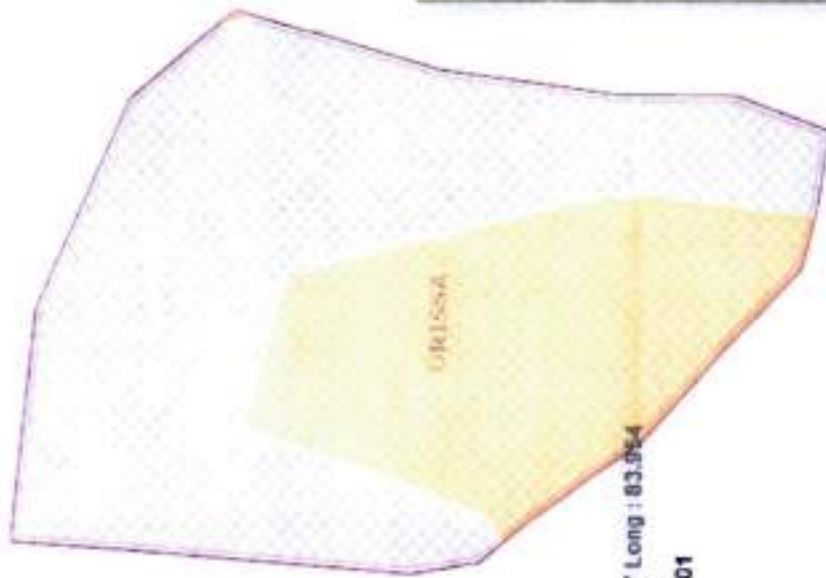
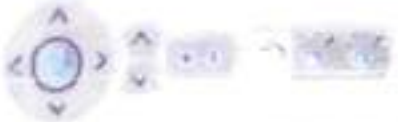


Lat : 22.335 Long : 83.892

Scale: 1:15782

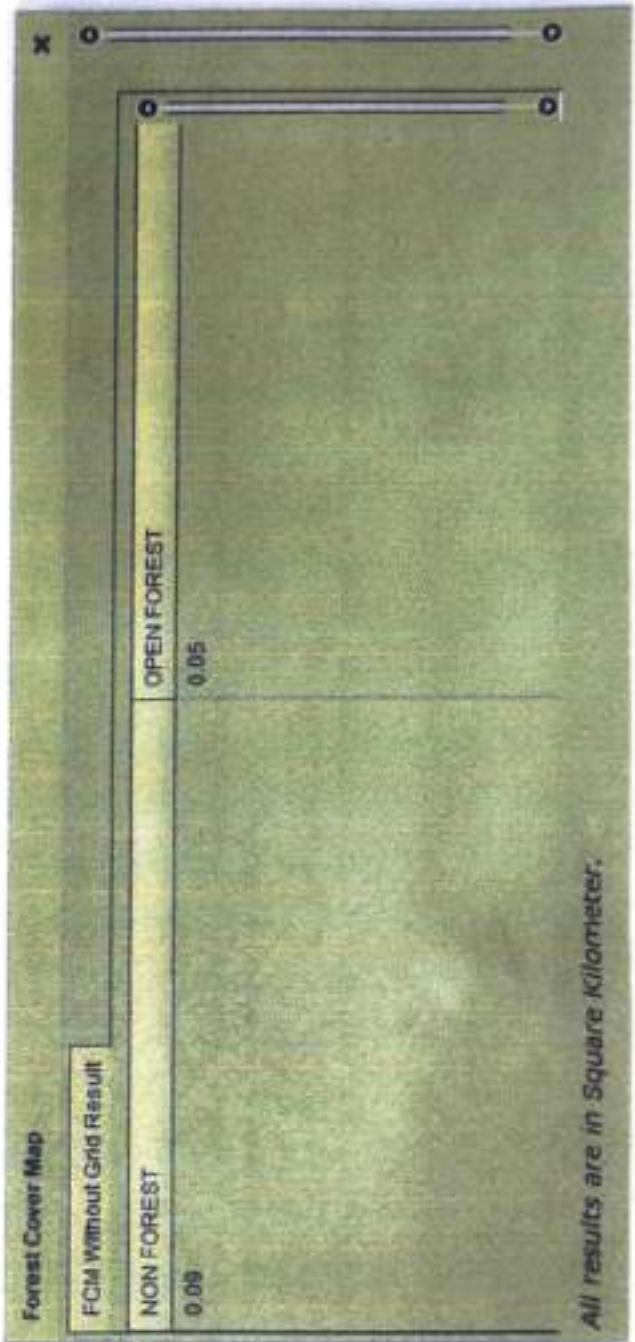


# Tangarpali DPF - Ujainpur Range



Lat : 22.077 Long : 83.054

Scale: 1:4801



**JOINT VERIFICATION OF FOREST LAND FOR COMPENSATORY AFFORESTATION IN FAVOUR OF KULDA OCP, MCL**

Division: Sundergarh

Range : Lephrpada

Forest Particular	Patch no.	Section	Beat	Area Identified for C.A. (In Ha.)
Sikajore A	1	Gundiadh	Halma	54.0
	2	Gundiadh	Halma	10.0
	3	Gundiadh	Halma	10.5
Sikajore PRF	1	Gundiadh	Halma	40.0

Range : Ujalpur

Forest Particular	Patch no.	Section	Beat	Area Identified for C.A. (In Ha.)
Tangarpali DPF	1	Ujalpur	Rupabahal	14.0

Range : Gopalpur

Forest Block	Patch no.	Section	Beat	Area Identified for C.A. (In Ha.)
Pandripani RF	1	Gopalpur	Sarangjharria	64.30
Sidharmunda RF	1	Gopalpur	Garjambahal	50.40
Punjipahar RF	1	Duduka	Duduka	37.70

1. Certified that land referred above of respective Range is having adequate soil depth suitable for plantation from management point of view.
2. Certified that land referred above of respective Range is free from encroachment and encumbrances.
3. Certified that land referred above of respective Range is not allotted previously.
4. Certified that land referred above of respective Range is not settled in favour of any individual/ community under F.R. Act, 2006
5. Certified that the above identified area of respective Range contains sparse vegetation with low density of forest growth and is fit for compensatory afforestation.

  
Signature & Seal of  
Range Officer  
Gopalpur Range

  
Signature & Seal of  
Range Officer  
Ujalpur Range

  
Signature & Seal of  
Range Officer  
Sundergarh Range



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

Memo No. 1970 /3F(Misc)-873/2025

Date: 11-04-2025

To

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

Sub:

Proposal for seeking prior approval of the Central Government under Section 2(ii) of the Van (Sanrakshan Evam Samvardhan) Adhniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kuld Open cast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh district of Sundargarh Forest Division.

Ref:

1. Your Memo No.6794 Dtd.24.03.2025
2. Memo No.1861 Dtd.08.04.2025 of the DFO, Sundargarh Division.

With reference to the aforementioned Memos on the captioned subject, the DFO, Sundargarh Division vide his Memo No.1860 Dtd.08.04.2025 addressed to this office and copy thereof endorsed to you in the next Memo of even date has submitted the revised Compensatory Afforestation Scheme over an area of 280.90 ha. of degraded Forest land identified in Sikajore-A RF(74.50 Ha.), Sikajore PRF(40 ha), Tangarpari DPF(14 ha), Pandripani RF(64.30 ha), Sidhamunda RF(50.40 ha) and Punjipahar RF(37.70 ha) in Sundargarh Forest Division against the aforementioned project which has been prepared in accordance with one time cost norm with a total financial outlay of Rs.13,17,36,351.00.

The revised Compensatory Afforestation scheme along with land suitability, joint verification report along with all certification. Geo-Referenced Map submitted by the DFO, Sundargarh Division is forwarded herewith in triplicate for favour of necessary approval at your end.

End: As above.

  
**Regional Chief Conservator of Forests,  
Rourkela Circle**

Memo No.

Date:

Copy forwarded to the Divisional Forest Officer, Sundargarh Division for information and necessary action with reference to his Memo No.1860 Dtd.08.04.2025.

  
**Regional Chief Conservator of Forests,  
Rourkela Circle**

## UNDERTAKING FOR TAKING UP COMPENSTORY AFFORESTATION

### Annexure-IV

It is undertaken that the compensatory afforestation over 280.9 ha of degraded forest land will be raised at the project cost. The afforestation works will be initiated within two years from the date of grant of final approval.

  
(Signature of User Agency)  
Official Seal

Date. 06.11.2025

Place. Basundhara

Project Officer  
Kulda Opencast Projec.  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**AGENCY COPY**

**यूनिऑन बैंक ऑफ इंडिया Union Bank of India**

**NEFT / RTGS CHALLAN for CAMPA Funds**

**Date : 23-08-2025**

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	5850293737
MeEF/SG File No.	8-07/2024-FC
Location.	ORRISA
Address.	Kulda DCP, MCL, Basundhara Area, Sundargarh, Odisha 770078 Sundargarh
Amount(In Rs)	275387987/- ✓

SBI NR 52025082696596623

Amount in Words : Twenty-Seven Crore Fifty-Three Lakh Eighty-Seven Thousand Nine Hundred and Eighty-Seven Rupees Only

**NEFT/RTGS to be made as per following details;**

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150025850293737 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCB Centre, 21/1, 21 Floor, Jetta Towers, Mission Road, Bengaluru-560027

740644515 KERKETTA  
S.E.I. BALINCA BRANCH  
26 AUG 2025  
COO  
LAW

This Challan is to be used for making payment to CAMPA by NEFT/RTGS only

Note: After making the required payment through the challan, please send a copy of the challan to Email: [fcob@unionbankofindia.bank](mailto:fcob@unionbankofindia.bank) or [ubin0903710@unionbankofindia.bank](mailto:ubin0903710@unionbankofindia.bank)

CA RS-10,99,09,200/-  
MIS RS-16,54,70,787

RS. 275387987

4221 26 AUG 2025 TR  
Journal No.  
Checker ID No.

*Handwritten signature and date: 20/8/25*


*Handwritten signature: Somnath Panda*

MCL, BASUNDHARA AREA

UNDERTAKING FOR PAYMENT OF ADDITIONAL NPV

Annexure-VI

Additional amount of NPV of the diverted forest land , if any, becoming due after finalization of the same by the Hon'ble Supreme Court of India, shall be paid accordingly by MCL.

  
(Signature of User Agency)  
Official Seal

Project Utilize:  
Kulda Opencast Proje-  
परियोजना अधिकारी  
कुल्दा परियोजना

Date 06.11.2025

Place Basundhara

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



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

Phone No-06622-272243, E-Mail- [dfo.sundargarh@odisha.gov.in](mailto:dfo.sundargarh@odisha.gov.in)



No. 4179/4F (Misc) Dt. 29/07/2025.

To:

The Project Officer,  
Kulda OCP Basundhara Area, (MCL)  
Sundargarh, Odisha-770076.

Sub: - Submission of Net Present Value amount demand Proposal for seeking prior approval of the central government under section-2 (1) (ii) of the van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kulda Open Cast coal mining project of Basundhara area of Mahanadi Coalfields Limited in Sundargarh district under Sundargarh Forest Division. (Proposal o. FP/OR/IN/50293/220) - Stage-I approval regarding.  
**-Demand for amount of Net Present Value (NPV).**

Ref: - 1. Stage-I approval Order No.8-07/224-FC dated.10.07.2025 of Assistant Inspector of General of Forests, FC Division, Gol, MoEF & CC, New Delhi.

Sir

With reference to the subject cited above, as per stipulated condition no. 3. (a) of Stage-I approval order the demand towards Net Present Value (NPV) against the diversion of 134.69 ha of forest land for Expansion of Kulda Open Cast coal mining project of Basundhara area of Mahanadi Coalfields Limited.

However, Net Present Value (NPV) calculation of the Forest area is furnished below: -

1. Forest land involved in the project - 134.69 Ha.
2. Density- 0.5
3. Eco class - III
4. Forest Growth- MDF (Tropical Dry Deciduous Forests)
5. Rate of NPV per Ha. - Rs. 12,28,590.00 Lakhs.  
Total Amount of NPV - 134.69Ha x Rs. 12,28,590.00 = Rs.16,54,78,787.00

Therefore, you are requested to deposit the amount of Rs.16,54,78,787.00 (Rupees Sixteen Crore Fifty Four Lakhs Seventy Eight Thousand Seven Hundred Eighty Seven) only towards Net Present Value over an area 134.69Ha through 'E' payment mode by using web portal of <http://parivesh.nic.in> (Parivesh Portal) of MoEF & CC, CAMPA account vide letter under reference and submit the original proof with seal and signature of the issuing bank to this Office needful action.

Yours faithfully

Divisional Forest Officer  
Sundargarh Forest Division

Memo No. 4180 /Dated 29 /07/2025

Copy forwarded to the Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC Act, O/o the PCCF, Odisha for favour of kind information and necessary action.

  
Divisional Forest Officer  
Sundargarh Forest Division.

Memo No. 4181 /Dated 29 /07/2025

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

  
Divisional Forest Officer  
Sundargarh Forest Division.

# Compliance Report of Stage-I Approval

Project: Basundhara Coal Washery (10 MTY) by Mahanadi Coalfields Limited

Forest Land: 29.41 ha

Proposal No.: 8-176/1997-FC(Vol.)

Stage-I Approval Date: 11.03.2019

The compliance to the Stage-I conditions was earlier submitted to the Assistant Inspector General of Forests (FC), Government of India, by the PCCF (FD & Nodal Officer, FC Act) vide Memo No. 18864/95 (Misc)-6/2016 dated 01.11.2019 (copy enclosed as **Annexure-A**). However, the updated compliance report is being re-submitted as follows:

**Condition No. (i): Legal status of the forest land proposed for diversion shall remain unchanged.**

**Compliance:** In compliance to the above this is to state that the legal status of Forest land proposed for diversion shall remain unchanged. The undertaking to this effect is furnished as **Annexure - I**.

**Condition No. (ii): Compensatory afforestation shall be raised over the non-forest land equal in extent to the forest land being diverted within three years of stage two clearance and maintained thereafter by the State Forest Department at the cost of the User Agency and at least 1000 plants per hectare shall be planted over identified non-forest land. If it is not possible to plant so many saplings in the area identified for CA, the balance saplings will be planted in any further forest as per approved working plan with provision for ten years on subsequent maintenance;**

**Compliance:** In compliance to the above, the degraded Forest land over 58.82 ha. has been identified in Regedakhol Reserve Forest of Sundargarh Forest Division for raising compensatory afforestation @ 200 plant per ha and additional degraded forest land over 51.194 ha (gross area) with an effective plantation area of 46 ha has been identified in Singaribahal reserve Forest of Sundargarh Forest Division for raising Compensatory afforestation @ 200 plant per ha. The aforesaid scheme for CA over 58.82 ha and the additional CA over 51.194 ha (gross area) within an effective plantation area of 46 ha has been technically approved by PCCF (FD & NO, FC Act) for Rs. 62,08,100/- and Rs. 39,29,300/- (including the cost of infrastructure development, amounting to Rs.2,00,000/-) respectively.

Further, an amount of Rs.2,30,14,540/- which includes CA cost of Rs.62,08,100/- has been deposited through online portal in the A/c of Adhoc-CAMPA vide UTR No. SBIN119298637318 dt.-28.10.2019 in the ORRISA CAMPA A/c no. 150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase -1, Lodhi road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment is enclosed as **Annexure-II**.

Further, an amount of Rs.2,30,14,540/- has been deposited which includes Additional CA cost of Rs.37,29,300/- (excluding the cost of infrastructure development amounting to Rs.2,00,000/-) through

  
20/11/2019

online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dt.-28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase -1, Lodhi road, New Delhi (IFSC Code-CORP0000371).The copy of receipt in support of the aforesaid payment is enclosed as **Annexure-III**.

Therefore, an amount of Rs.99,37,400/- ( CA cost of Rs 62,08,100/- + Additional CA cost of Rs 37,29,300/-)has been deposited towards Compensator Afforestation through e-portal in the A/c of Adhoc-CAMPA.

**Condition No. (iii) : 25% of CA cost will be deposited extra by the user agency for soil and moisture conservation (SMC) activities on the CA land;**

**Compliance:** In compliance to the above, this is to state that 25% of the CA cost has already been included in the CA scheme for Soil and Moisture Conservation (SMC) activities on CA land. However, it has been agreed upon to deposit extra 25% of CA cost for Soil and Moisture Conservation (SMC) activities on the CA land, if required at a later stage. The undertaking to this effect furnished by the User Agency is enclosed as **Annexure-IV**.

**Condition No. (iv) The admissible identified non-forest land raising compensatory afforestation shall be transferred and mutated in favour of the State Forest Department before issue of the Stage-II clearance and the same shall be notified by the State Government as RF under Section-4 or PF under Section-20 of the Indian Forest Act, 1927 or under the relevant Section(s) of the local Forest Act, as the case may be, within a period of six months. The Nodal Officer (Forest Conservation) shall report compliance in this regard.**

**Compliance:** In compliance to the above, this is to state that the compensatory afforestation site for Basundhara Coal Washery (10 MTY) has been identified in Regedakhhol Reserve Forest and Singaribahal Reserve Forest under Sundargarh Forest Division and therefore, transfer and mutation in favour of the State Forest Department is not required. Only in case of degraded Revenue Forest / Government Non-Forest land, it shall be notified by the State Government as RF under Section-4 or PF under Section-20 of the Indian Forest Act, 1972.

**Condition No. (v): The land identified for the purpose of CA shall be clearly depicted on a Survey of India topo-sheet of 1:50000 scale.**

**Compliance:** In compliance to the above, this is to state that the lands identified for the purpose of CA in Regedakhhol RF and Singaribahal RF have been depicted on Survey of India topo-sheet No. F44L16 & F44R9 of 1:50000 scales respectively, which are enclosed as **Annexure-V**.

**Condition No. (vi): The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation at the current wage rate in consultation with State Forest**

*Handwritten signature and date:*  
20/11/2019

Department in the account of CAMPA of the concerned State through online portal. The scheme may include appropriate provision for anticipated cost increase for works scheduled for subsequent years.

**Compliance:** In compliance to the above, this is to state that the degraded forest land over 58.82 ha. has been identified in Regedakhhol Reserve Forest of Sundargarh Forest Division for raising Compensatory Afforestation @200 plants per ha and additional degraded forest land over 51.194 ha (gross area) with an effective plantation area of 46 ha has been identified in Singaribahal Reserve Forest of Sundargarh Forest Division for raising Compensatory Afforestation @ 200 plants per ha. The aforesaid schemes for CA over 58.82 ha and the additional CA over 51.194 ha (gross area) with an effective plantation area of 46 ha have been technically approved by PCCF (FD & NO, FC Act) for Rs. 62,08,100/- and Rs.39,29,300/- (including the cost of infrastructure development amounting to Rs.2,00,000/-) respectively including provision of 20% escalation cost for work scheduled for subsequent years.

Further, this is to state that the an amount of Rs.2,30,14,540/- which has been deposited includes CA cost of Rs.62,08,100/- through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment is enclosed as **Annexure-VI**.

Further, Additional CA cost of Rs 37,29,300/-(excluding the cost of infrastructure development amounting to Rs.2,00,000/-) has also been deposited through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment is enclosed as **Annexure-VII**.

Therefore, an amount of Rs.99,37,400/- (CA cost of Rs.62,08,100/- + Additional CA cost of Rs 37,29,300/-) in total has been deposited towards Compensatory Afforestation through e-portal in the A/c of Adhoc-CAMPA.

**Condition No.(vii) :** *The User Agency shall transfer the funds for the Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. S-3/2007-FC dated 05.02.2009 through online portal of CAMPA account of the State Concerned;*

**Compliance:** In compliance to the above, this is to state that the area proposed for diversion under this project is 29.41 ha which includes fresh forest land of 20.89 ha and re-diversion of 8.52 ha out of already diverted forest area of 227.89 ha. for Kulda OCP of MCL. Accordingly, a sum of Rs.2,30,14,540/- which includes Rs.1,30,77,140/- (@Rs.6,26,000/- per ha., Canopy Density: 0.2 and Eco-Value Class-III) towards the Net Present Value(NPV) of 20.89 ha of fresh forest land has been deposited through online portal in the Account of Adhoc-CAMPA vide UTR No. SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex,Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of e-challan and the

  
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copy of the UTR duly certified by Branch Manager, State Bank of India, Balinga (Branch) are enclosed as Annexure-VIII & IX respectively.

**Condition No.(viii)** At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;

**Compliance:** In compliance to the stipulated condition, an undertaking is furnished herewith as Annexure-X to this effect that MCL is agreeing to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India.

**Condition No.(ix)** User Agency should ensure that the Compensatory levies (CA cost, NPV, etc.) are deposited through challan generated online on web portal and deposited in appropriated bank online only. Amount deposited through other mode will not be accepted as compliance of Stage-I clearance;

**Compliance:** Compliance: In compliance to the above, all the funds received from the User Agency have been transferred to Ad-hoc CAMPA through online portal of Ad-hoc CAMPA. Account The details of the following amounts deposited by the user agency is furnished below:-

Sl. No.	Type of deposit (NPV/CA/WLMP others(specify))	Whether by RTGS/BD/DD/NEFT (Specify)	UTR/DD No./BD No.	Amount deposited (Rs.)	Date of deposit	Name of Bank from which amount transferred to account CAF	Bank account of CAF managed by CAMPA in which fund deposited	Deposited with
1.	CA	Online	SBIN119298637318	62,08,100 Part of deposit of Rs. 2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA
2.	Addl. CA	Online	SBIN119298637318	37,29,300 Part of deposit of Rs. 2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA
3.	NPV	Online	SBIN119298637318	1,30,77,140 Part of deposit of Rs. 2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA
4.	Addl NPV	NEFT	SBIN152025021575454052	69,30,884	13.02.2025	SBI, Balinga Branch	Union Bank of India, Bengaluru	ORRISA CAMPA

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**Condition No.(x)** *The State Govt. shall complete settlement of rights in term of the Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 if any, on the forest land to be diverted and submit the documentary evidence as prescribed by this Ministry in its letter No.11-9/1998-FC (Pl.), Dd:03.08.2009 read with 05.07.2013 in support thereof.*

**Compliance:** In compliance to the above, the Collector Sundargarh has issued the required certificate in the prescribed format vide Letter No.1738 dt14.09.2016 of Additional District Magistrate Sundargarh under Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 in respect of diversion of forest land measuring 29.41 ha of entire forestland including Reserved Forest in village Balinga, Bankibahal and Kulsira for non-forestry use for construction of Basundhara Coal Washery of Mahanadi Coal Field Ltd. under Hemgiri Tahasil. The copy of the certificate issued by Collector Sundargarh is enclosed as **Annexure- XI**.

**Condition No.(xi)** *Since an area of 8.52 ha of forest land is being re-diverted from already diverted forest area of 227.89 ha for Kulda OCP of Mahanadi Coalfields Limited Sundargarh Forest Division of Sundargarh District, Odisha for construction of Basundhara Coal Washery (10 MTY) by M/s.Mahanadi Coalfields Limited, therefore, the land use plan and mining plan shall be got approved before Stage-II Clearance and a copy of the same submitted to this Ministry for record.*

**Compliance:** In compliance to the above, this is to state that the mining plan for Kulda Expansion OCP incorporating the changes in land use due to re-diversion of 8.52 ha for Basundhara Coal Washery of MCL has been prepared and approved by MCL Board. The copy of approval note along with approved Mining Plan is enclosed as **Annexure-XII & XIII**.

**Condition No.(xii)** *The User Agency shall prepare and implement Risk Management Plan and the User Agency shall take all necessary measures to prevent fire hazards;*

**Compliance:** In compliance to the above, this is to state that a Risk Management Plan has been prepared for prevention of fire hazards for the Area of Basundhara Coal Washery which will be implemented accordingly. A copy of the Risk Management Plan is enclosed as **Annexure-XIII**.

**Condition No.(xiii)** *Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;*

**Compliance:** In compliance to the above this is to state that an undertaking is being submitted that the period of diversion of the 29.41 ha forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under. The undertaking to this effect is enclosed as **Annexure-XIV**.

*Handwritten signature and date:*  
20/11/2015

**Condition No.(xiv)** *User agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act 1986, if required;*

**Compliance:** In compliance to the above, it is to state that Environment Clearance for Basundhara Coal Washery of 10 MTPA has been obtained vide J-11015/435/2013-1A-II(M) dt. 31.10.2019 copy of which is enclosed as **Annexure-XV**.

**Condition No.(xv)** *No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;*

**Compliance:** In compliance to the above, this is to state that no labour camps shall be established on the forest land and fuels preferably alternate fuels shall be provided to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas. The undertaking to this effect is furnished as **Annexure-XVI**.

**Condition No. (xvi)** *The boundary of the diverted forest land shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates;*

**Compliance:** In compliance to the above, this is to state that the boundary of the diverted forest land has already been demarcated with 4' high RCC pillars and the specified information, i.e. serial number, DGPS coordinates & distance from pillar to pillar have been inscribed on the pillars. The geo coordinates has been provided herewith as **Annexure-XVII**.

**Condition No.(xvii)** *The forest land shall not be used for any purpose other than that specified in the proposal and the forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government.*

**Compliance:** In compliance to the above, it is hereby undertaken that the forest land shall not be used for any purpose other than that specified in the proposal and the forest land proposed to be diverted shall under no circumstances be transferred to any other agency, Department or person without prior approval of the Central Government. The Undertaking to this effect is enclosed as **Annexure-XVIII**.

**Condition No.(xviii)** *No damage to the flora and fauna of the adjoining area shall be caused;*

**Compliance:** In compliance to the above, it is hereby undertaken that no damage to the flora and fauna of the adjoining area shall be caused. The Undertaking to this effect is enclosed as **Annexure-XIX**.

*Handwritten signature and date:*  
20/11/2025

**Condition No.(xix)** *The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall, be done only when it is unavoidable and that too under strict supervision of the State Forest Department;*

**Compliance:** In compliance to the above, it is hereby undertaken that the possibility of translocation of maximum number of trees identified to be felled shall be explored and any tree felling shall be done only when it is unavoidable and that too under the strict supervision of the State Forest Department. The undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XX**.

**Condition No.(xx)** *The User Agency shall submit the annual self compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;*

**Compliance:** In compliance to the above, it is hereby undertaken to submit the Annual Self Compliance Report in respect of the above conditions to the State Government, concerned Regional Office and to the of Ministry of Environment, Forest and Climate Change by the end of March every year regularly. The undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XXI**.

**Condition No.(xxi)** *Any other condition that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife; and*

**Compliance:** In compliance to the above, it is hereby undertaken to abide by any other condition that the concerned Regional Office of the MoEF& CC, Gol may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife. The Undertaking to this effect is enclosed as **Annexure-XXII**.

**Condition No.(xxii)** *The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order(s) and NGT Order(s) pertaining to this project, if any, for the time being in force, as applicable to the project.*

**Compliance:** In compliance to the above, it is hereby undertaken to comply all the provision of all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order(s) and NGT Order(s) pertaining to this project, if any, for the time being in force, as applicable to the project. The Undertaking to this effect is enclosed as **Annexure-XXIII**.

**Compliance of additional conditions stipulated by Govt. of Odisha vide letter no. 10F (Cons)91/2016-6414/F&E, Bhubaneswar, dated 29.03.2019:-**

**Condition No.(a)** *The Collector, Sundargarh shall furnish detailed compliance of FRA guidelines of MoEF&CC pertaining to forest land proposed for diversion.*

**Compliance:** In compliance to the above, the Collector Sundargarh has issued the required

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certificate in the prescribed format vide Letter No.1738 dt14.09.2016 of Additional District Magistrate Sundargarh under Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 in respect of diversion of forest land measuring 29.41 ha of entire forest land including Reserved Forest in village Balinga, Bankibahal and Koisira for non-forestry use for construction of Basundhara Coal Washery of Mahanadi Coal Field Ltd. under Hemgiri Tahasil. The copy of the certificate issued by Collector Sundargarh is enclosed as **Annexure-XXIV**.

**Condition No.(h)** Operation of the project shall be subject to proper resettlement and rehabilitation of project affected families as per approved R&R policy.

**Compliance:** In compliance to the above, it is hereby undertaken that the operation of the project shall be done subject to proper resettlement and rehabilitation of project affected families as per approved R&R policy. The undertaking to this effect is enclosed as **Annexure-XXV**.

**Condition No.(c)** Operation of the Basundhara Coal Washery will be subject to availability of valid environmental clearance of MoEF&CC and CTE/CTO of SPCB, Odisha.

**Compliance:**In compliance to the above, it is to state that Environment Clearance for Basundhara Coal Washery of 10 MTPA has been obtained vide J-11015/435/2013-IA-II(M) dt. 31.10.2019 copy of which is enclosed as **Annexure-XXVI**.

**Condition No.(d)** User Agency shall prepare the Site-Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha to be approved by PCCF (WL) & CWLW, Odisha for its execution at project cost.

**Compliance:** In compliance to the above, this is to state that the Site-Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha has been prepared and approved by PCCF (WL) & CWLW, Odisha with a capital outlay of Rs. 676.553 Lakhs. The copy of the approval of Site-Specific Wildlife Conservation Plan is attached herewith as **Annexure-XXVII** & copy of approved Site specific Wild life conservator plan is attached herewith as **Annexure- XXVIII**

**Condition No.(e)** Updated State profile for this project duly signed by Addl. PCCF (Forest Diversion) & Nodal Officer, FC Act shall be furnished.

**Compliance:** In compliance to the above, it is hereby undertaken to provide the updated State profile for this project duly signed by PCCF (Forest Diversion) & Nodal Officer, FC Act. The undertaking to this effect furnished is enclosed as **Annexure-XXIX**.

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*20/11/2023*  
PROJECT OFFICER  
KULDA OCP, BASUNDHARA AREA, MCL  
Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना



STATE FOREST HEADQUARTERS  
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS, ODISHA,  
BHUBANESWAR

No.  
Dated, Bhubaneswar the

/9F (Misc)-6/2016  
November' 2019

From:

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

To

The Assistant Inspector General of Forest (F.C),  
Government of India,  
Ministry of Environment, Forests & Climate Change (F. C. Division),  
Indira Paryavaran Bhawan, Aliganj, Jor Bagh Road,  
New Delhi- 110003.

Sub:- Proposal for diversion of 29.41 ha of forest land (20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha of Kulda OCP of Mahanadi coal fields Ltd) in Sundargarh Forest Division of Sundargarh District, Odisha for construction of Basundhara Coal Washery (10MTY) by Mahanadi Coal fields Limited.

Madam,

In inviting a reference to the aforementioned subject Government of India, Ministry of Environment, Forest & Climate Change, New Delhi have accorded Stage-I approval vide their letter No.F.No.8-176/1997-PC (Vol.) dated 11.03.2019 for diversion of 29.41 ha of forest land (20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha of Kulda OCP of Mahanadi coal fields Ltd) in Sundargarh Forest Division of Sundargarh District, Odisha for construction of Basundhara Coal Washery (10MTY) by Mahanadi Coal fields Limited subject to fulfilment of Twenty Two (22) nos. of conditions stipulated therein. The User Agency has complied all the conditions imposed by Government of India, Ministry of Environment, Forest & Climate Change and additional five (5) conditions imposed by State Government. The pointwise compliance received from the RCCF Rourkela Circle are furnished below:-

**Condition No.(i):-** Legal status of the forest land proposed for diversion shall remain unchanged.

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the legal status of Forest land proposed for diversion shall remain unchanged. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-I.

***Condition No.(ii)*** *Compensatory afforestation shall be raised over the non-forest land equal in extent to the forest land being diverted within three years of Stage-II Clearance and maintained thereafter by the State Forest Department at the Cost of the User Agency and at least 1000 plants per hectare shall be planted over identified non-forest land. If it is not possible to plant so many saplings in the area identified for CA, the balance saplings will be planted in any other forests as per prescriptions of approved working plan with provision for ten years on subsequent maintenance;*

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the degraded forest land over 58.82 ha. has been identified in Regodakhol Reserve Forest of Sundargarh Forest Division for raising Compensatory Afforestation @200 plants per ha and additional degraded forest land over 51.194 ha (gross area) with an effective plantation area of 46 ha has been identified in Singaribahal Reserve Forest of Sundargarh Forest Division for raising Compensatory Afforestation @ 200 plants per ha. The aforesaid schemes for CA over 58.82 ha and the additional CA over 51.194 ha (gross area) with an effective plantation area of 46 ha have been technically approved by PCCF (FD & NO, FC Act) for Rs. 62,08,100/- and Rs. 39,29,300/- (including the cost of infrastructure development amounting to Rs.2,00,000/-) respectively.

Further, the DFO Sundargarh Division has reported that the User Agency has deposited Rs.2,30,14,540/- which includes CA cost of Rs.62,08,100/- through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment submitted by DFO Sundargarh is enclosed as **Annexure-II**.

Again the DFO Sundargarh Division has reported that the User Agency has deposited Rs.2,30,14,540/- which includes Additional CA cost of Rs.37,29,300/-(excluding the cost of infrastructure development amounting to Rs.2,00,000/-) through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment submitted by DFO Sundargarh is enclosed as **Annexure-III**.

Therefore, the User Agency has deposited Rs.99,37,400/- (CA cost of Rs.62,08,100/- + Additional CA cost of Rs.37,29,300/-) towards Compensatory Afforestation through e-portal in the A/c of Adhoc-CAMPA.

**Condition No.(iii)** 25% of CA cost will be deposited extra by the user agency for soil and moisture conservation (SMC) activities on the CA land;

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that 25% of the CA cost has already been included in the CA scheme for Soil and Moisture Conservation (SMC) activities on CA land. However, the User Agency has agreed to deposit extra 25% of CA cost for Soil and Moisture Conservation (SMC) activities on the CA land by DFO, if required at a later stage. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-IV.

**Condition No.(iv)** The admissible identified non-forest land raising compensatory afforestation shall be transferred and mutated in favour of the State Forest Department before issue of the Stage-II clearance and the same shall be notified by the State Government as RF under Section-4 or PF under Section-20 of the Indian Forest Act, 1927 or under the relevant Section(s) of the local Forest Act, as the case may be, within a period of six months. The Nodal Officer (Forest Conservation) shall report compliance in this regard;

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the compensatory afforestation site for Basundhara Coal Washery (10 MTY) has been identified in Regedakhhol Reserve Forest and Singaribahal Reserve Forest under Sundargarh Forest Division and therefore, transfer and mutation in favour of the State Forest Department is not required. Only in case of degraded Revenue Forest /Government Non-Forest land, it shall be notified by the State Government as RF under Section-4 or PF under Section-20 of the Indian Forest Act, 1972.

**Condition No.(v)** The land identified for the purpose of CA shall be clearly depicted on a Survey of India topo-sheet of 1:50000 scale.

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the lands identified for the purpose of CA in Regedakhhol RF and Singaribahal RF have been depicted on Survey of India topo-sheet No.F44L16 & F44R9 of 1:50000 scales respectively which are enclosed as Annexure-V.

**Condition No.(vi)** The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation at the current wage rate in consultation with State Forest Department in the account of CAMPA of the concerned State through online portal. The scheme may include appropriate provision for anticipated cost increase for works scheduled for subsequent years.

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the degraded forest land over 58.82 ha. has been identified in Regedakhhol Reserve Forest of Sundargarh Forest Division for raising Compensatory Afforestation @200 plants per ha and additional degraded forest land over 51.194 ha (gross area) with an effective plantation area of 46 ha has been identified in Singaribahal Reserve Forest of Sundargarh Forest Division for raising Compensatory

Afforestation @ 200 plants per ha. The aforesaid schemes for CA over 58.82 ha and the additional CA over 51.194 ha (gross area) with an effective plantation area of 46 ha have been technically approved by PCCF (FD & NO, FC Act) for Rs. 62,08,100/- and Rs.39,29,300/- (including the cost of infrastructure development amounting to Rs.2,00,000/-) respectively including provision of 20% escalation cost for work scheduled for subsequent years.

Further, the DFO Sundargarh Division has reported that the User Agency has deposited Rs.2,30,14,540/- which includes CA cost of Rs.62,08,100/- through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment submitted by DFO Sundargarh is enclosed as **Annexure-VI**.

Again the DFO Sundargarh Division has reported that the User Agency has deposited Rs.2,30,14,540/- which includes Additional CA cost of Rs.37,29,300/- (excluding the cost of infrastructure development amounting to Rs.2,00,000/-) through online portal in the A/c of Adhoc-CAMPA vide UTR No.SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex, Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of the receipt in support of the aforesaid payment submitted by DFO Sundargarh is enclosed as **Annexure-VII**.

Therefore, the User Agency has deposited Rs.99,37,400/- (CA cost of Rs.62,08,100/- + Additional CA cost of Rs.37,29,300/-) towards Compensatory Afforestation through e-portal in the A/c of Adhoc-CAMPA.

***Condition No.(vii) The User Agency shall transfer the funds for the Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. 5-3/2007-FC dated 05.02.2009 through online portal of CAMPA account of the State Concerned;***

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the area proposed for diversion under this project is 29.41 ha which includes fresh forest land of 20.89 ha and re-diversion of 8.52 ha out of already diverted forest area of 227.89 ha. for Kulda OCP of MCL. The User Agency has deposited a sum of Rs.2,30,14,540/- which includes Rs.1,30,77,140/- (@ Rs.6,26,000/- per ha., Canopy Density: 0.2 and Eco-Value Class-III) towards the Net Present Value(NPV) of 20.89 ha of fresh forest land through online portal in the Account of Adhoc-CAMPA vide UTR No. SBIN119298637318 dated 28.10.2019 in the ORISSA CAMPA A/c No.150826716495050 in Corporation Bank, Lodhi Complex Branch, Block-11, CGO Complex,

Phase-I, Lodhi Road, New Delhi (IFSC Code-CORP0000371). The copy of e-challan and the copy of the UTR duly certified by Branch Manager, State Bank of India, Balinga (Branch) are enclosed as Annexure-VIII & IX respectively.

**Condition No.(viii)** At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India which is enclosed as Annexure-X.

**Condition No.(ix)** User Agency should ensure that the Compensatory levies (CA cost, NPV, etc.) are deposited through challan generated online on web portal and deposited in appropriated bank online only. Amount deposited through other mode will not be accepted as compliance of Stage-I clearance;

**Compliance:** In compliance to the above, all the funds received from the User Agency have been transferred to Ad-hoc CAMPA through online portal of Ad-hoc CAMPA Account. The details of the following amounts deposited by the user agency is furnished below:-

Sl. No.	Type of deposit [NPV /CA /TWMP Others (specify)]	Whether by RTGS/B D/DD/N EFT (Specify)	UTR/DD No./BD No.	Amount deposited (Rs.)	Date of deposit	Name of Bank from which amount transferred to account CAF	Bank Account of CAF managed by CAMPA in which fund deposited	Deposited with
1.	CA	Online	SBIN11929 8637318	62,08,100 Part of deposit of Rs.2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA
2.	Addl. CA	Online	SBIN11929 8637318	37,29,300 Part of deposit of Rs.2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA
4.	NPV	Online	SBIN11929 8637318	1,30,77,140 Part of deposit of Rs.2,30,14,540	28.10.2019	SBI, Balinga Branch	Corporation Bank, Lodhi Road, New Delhi	Adhoc-CAMPA

**Condition No.(x)** The State Govt. shall complete settlement of rights in term of the Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 if any, on the forest land to be diverted and submit the documentary evidence as prescribed by this Ministry in its letter No.11-9/1998-FC (Pt.), Dtd:03.08.2009 read with 05.07.2013 in support thereof.

**Compliance:** In compliance to the above, the Collector Sundargarh has issued the required certificate in the prescribed format vide Letter No.1738 dt14.09.2016 of Additional District Magistrate Sundargarh under Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 in respect of diversion of forest land measuring 29.41 ha of entire forest

land including Reserved Forest in village Balinga, Bankibahal and Koisira for non-forestry use for construction of Basundhara Coal Washery of Mahanadi Coal Field Ltd. under Hemgiri Tahasil. The copy of the certificate issued by Collector Sundargarh is enclosed as Annexure-XI.

***Condition No.(xi) Since an area of 8.52 ha of forest land is being re-diverted from already diverted forest area of 227.89 ha for Kulda OCP of Mahanadi Coalfields Limited in Sundargarh Forest Division of Sundargarh District, Odisha for construction of Basundhara Coal Washery (10 MTY) by M/s.Mahanadi Coalfields Limited, therefore, the land use plan and mining plan shall be got approved before Stage-II Clearance and a copy of the same be submitted to this Ministry for record.***

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the new mining plan for Kulda Expansion OCP is under preparation, incorporating the changes in land use due to re-diversion of 8.52 ha for Basundhara Coal Washery of MCL and the same shall be submitted to the Ministry after getting approval from MCL Board before Stage-II Clearance. An undertaking to this effect furnished by the User Agency is enclosed as Annexure-XII.

***Condition No.(xii) The User Agency shall prepare and implement Risk Management Plan and the User Agency shall take all necessary measures to prevent fire hazards;***

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the Risk Management Plan is under preparation for prevention of fire hazards for the Area of Basundhara Coal Washery which will be implemented by the User Agency accordingly. An undertaking to this effect furnished by the User Agency is enclosed as Annexure-XIII.

***Condition No.(xiii) Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under;***

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking that the period of diversion of the 29.41 ha forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-XIV.

***Condition No.(xiv) User agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act 1986, if required;***

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that in the 41<sup>st</sup> meeting of the EAC held on 14th December, 2018, EAC has recommended the proposal for grant of Environmental Clearance to Basundhara Washery (10 MTY) of M/s Mahanadi Coalfields

Limited in District of Sundargarh (Odisha). The copy of minutes furnished by the User Agency is enclosed as **Annexure-XV**.

**Condition No.(xv)** *No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;*

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking not to establish any labour camp on the forest land and shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas. The undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XVI**.

**Condition No.(xvi)** *The boundary of the diverted forest land shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates;*

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the boundary of the diverted forest land has already been demarcated with 4' high RCC pillars and the specified information, i.e. serial number, DGPS coordinates & distance from pillar to pillar have been inscribed on the pillars.

**Condition No.(xvii)** *The forest land shall not be used for any purpose other than that specified in the proposal and the forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government.*

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking not to use the forest land for any purpose other than that specified in the proposal and the forest land proposed to be diverted shall under no circumstances be transferred to any other agency, Department or person without prior approval of the Central Government. The Undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XVII**.

**Condition No.(xviii)** *No damage to the flora and fauna of the adjoining area shall be caused;*

**Compliance:** : In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking not to cause damage to the flora and fauna of the adjoining area. The Undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XVIII**.

Compliance of additional conditions stipulated by Govt. of Odisha vide letter no. 10F

(Cons)91/2016 – 6414/F&E, Bhubaneswar, dated 29.03.2019:-

**Condition No.(a) The Collector, Sundargarh shall furnish detailed compliance of FRA guidelines of MoEF&CC pertaining to forest land proposed for diversion.**

**Compliance:** In compliance to the above, the Collector Sundargarh has issued the required certificate in the prescribed format vide Letter No.1738 dt14.09.2016 of Additional District Magistrate Sundargarh under Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act-2006 in respect of diversion of forest land measuring 29.41 ha of entire forest land including Reserved Forest in village Balinga, Bankibahal and Koisira for non-forestry use for construction of Basundhara Coal Washery of Mahanadi Coal Field Ltd. under Hemgiri Tahasil. The copy of the certificate e issued by Collector Sundargarh is enclosed as Annexure-XXIII.

**Condition No.(b) Operation of the project shall be subject to proper resettlement and rehabilitation of project affected families as per approved R&R policy.**

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking for operation of the project subject to proper resettlement and rehabilitation of project affected families as per approved R&R policy. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-XXIV.

**Condition No.(c) Operation of the Basundhara Coal Washery will be subject to availability of valid environmental clearance of MoEF &CC and CTE/CTO of SPCB, Odisha.**

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking to obtain valid Environment Clearance (EC) from MoEF & CC before operation of Basundhara Coal Washery. The Consent to Establish (CTE) has been obtained from the State Pollution Control Board, Odisha vide Memo No., 8009 dt08.06.2017 and Consent to Operate (CTO) from State Pollution Control Board, Odisha will be obtained soon before operation of Basundhara Coal Washery. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-XXV.

**Condition No.(d) User Agency shall prepare the Site-Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha to be approved by PCCF (WL) & CWLW, Odisha for its execution at project cost.**

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking to prepare the Site-Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha to be approved by PCCF (WL) & CWLW, Odisha for its execution at project cost. The undertaking to this effect furnished by the User Agency is enclosed as Annexure-XXVI. The DFO, Sundargarh Division has reported that, the tender process for preparation of Site Specific Wild Life Conservation Plan is in final stage.

Condition No.(e) Updated State profile for this project duly signed by Addl. PCCF (Forest Diversion) & Nodal Officer, FC Act shall be furnished.

**Compliance:** In compliance to the above, the DFO Sundargarh Division has reported that the User Agency has furnished an undertaking to provide updated State profile for this project duly signed by PCCF (Forest Diversion) & Nodal Officer, FC Act. The undertaking to this effect furnished by the User Agency is enclosed as **Annexure-XXVII**.


In view of the above, the compliance to the conditions imposed by MoEF & CC, New Delhi and State Government is sent herewith for according final approval for diversion of 29.41 ha of forest land (20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha of Kuida OCP of Mahanadi coal fields Ltd) in Sundargarh Forest Division of Sundargarh District, Odisha for construction of Basundhara Coal Washery (10MTY) by Mahanadi Coal fields Limited under Section 2 of Forest (Conservation) Act, 1980.

Yours faithfully,

**Encl- Annexure-I to XXVII**  
**in One (1) set**

Memo No. /Dt.

Copy alongwith copy of one set of Stage-I compliance forwarded to the Addl. Director General of Forests (Central), MoEF & CC, Government of India, Eastern Regional Office, A/3, Chandrasekharpur, Bhubaneswar for information and necessary action.

  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19

**Encl- Annexure-I to XXVII**  
**in One (1) set**

Memo No. /Dt.


Copy alongwith copy of one set of Stage-I compliance forwarded to Principal Secretary to Government, F&E Deptt, Govt. of Odisha, Bhubaneswar for information and necessary action with reference to Letter No.10(Con)91/2016-6414/F&E dated 29.03.2019 of Special Secretary to Government, F&E Department.


  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19

**Encl- Annexure-I to XXVII**  
**in One (1) set**

Memo No. /Dt.

Copy forwarded to the Regional Chief Conservator of Forests, Rourkela Circle for information and necessary action with reference to his Memo No.3001 dated 31.10.2019.

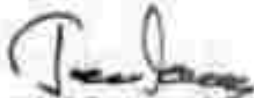
  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19

  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19

Memo No.

/Dt.

Copy forwarded to the Divisional Forest Officer, Sundargarh Forest Division for information and necessary action with reference to Memo No.3002 dated 31.10.2019 of RCCF Rourkela Circle to his address.

  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19


Memo No.

18869

/Dt.

01.11.19

Copy forwarded to the General Manager, Mahanadi Coal Fields Ltd., Basundhara Area, A/Po-Basundhara, District-Sundargarh, Odisha for information.

  
Principal Chief Conservator of Forests  
Forest Diversion & Nodal Officer, FC Act  
01/11/19

ମହାନଦୀ କୋଲଫିଲ୍ଡ ଲିମିଟେଡ୍  
ମହାନଦୀ କୋଲଫିଲ୍ଡ ଲିମିଟେଡ୍  
Mahanadi Coalfields Limited  
(A subsidiary of Coal India Limited)

Office of The General Manager  
Basundhara Area  
AT/PO-Basundhara-770078  
Dist-Sundargarh (Orissa)



**MCL**

Annexure-I

**UNDERTAKING FOR NON-CHANGING OF LEGAL STATUS  
OF FOREST LAND**

(Condition No. (i))

We do hereby undertake that the Legal status of the 29.41 ha. of Forest Land proposed for diversion for Basundhara Coal Washery shall remain unchanged.

  
29/10/19

General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
20/11/2019

Project Officer  
Kulda Opencast Project  
ପରିଚାଳନା ଅଧିକାରୀ  
କୁଲଡା ଓପେନକାସ୍ଟ ପ୍ରକଳ୍ପ



Divisional Forest Officer  
Sundargarh Division

AGENCY COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 25-10-2018	
Agency Name.	MCL
Application No.	8718486000
MoEF/SQ File No.	S-176/1987-FC VOL.
Location.	ORISSA
Address.	Jagrus Vihar Sambalpur
Amount(In Rs)	23014540/- ✓
Amount in Words: Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	CORP0009371
Pay to Account No.	180828718488000 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11, CGO Complex, Phase I, Lodhi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

BANK COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 25-10-2018	
Agency Name.	MCL
Application No.	8718486000
MoEF/SQ File No.	S-176/1987-FC VOL.
Location.	ORISSA
Address:	Jagrus Vihar Sambalpur
Amount(In Rs)	23014540/-
Amount in Words: Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	CORP0009371
Pay to Account No.	180828718488000 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11, CGO Complex, Phase I, Lodhi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

After making successful payment, User Agencies may send a line of confirmation through Email: [helpdeskcompa@corpbank.co.in](mailto:helpdeskcompa@corpbank.co.in)

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CA - 99,37,400/-  
NPV - 1,30,77,140/-  

---

2,30,14,540/-

  
Divisional Forest Officer  
Sundargarh Division

**AGENCY COPY**  
**NEFT / RTGS CHALLAN for Ad-HOC CAMPA**  
 Date : 25-10-2018

Agency Name.	MCL
Application No.	871648999
NEFT/RTGS File No.	8-1781387-FC VOL.
Location.	ORISSA
Address.	Jugraji ViharBambalpur
Amount(In Rs)	23014545/-

Amount in Words : Ten Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only

**NEFT/RTGS to be made as per following details:**

Beneficiary Name:	ORISSA CAMPA
IFSC Code:	CORP0000371
Pay to Account No.	15962371648999 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11,CGO Complex, Phase I, Lodhi Road, New Delhi - 110002

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only
- This challan is valid only for seven days.

After making successful payment, User Agencies may  
 Email: [helpdeskcampe@corpbank.co.in](mailto:helpdeskcampe@corpbank.co.in)

581N119298637318

*Datta*  
*Sambanth Singh*

*[Signature]*  
 Divisional Forest Officer  
 Sundergarh Division

5672651 / R.K. SETHI  
 SSI BALINGA BRANCH  
 CASH  
 25 OCT 2018  
 Journal No :  
 Cheque No :

SRICHIDLA SAMA MARANDI  
 SSI BALINGA BRANCH  
 CASH  
 25 OCT 2018  
 Journal No :  
 Cheque No :

ମହାନଦୀ କୋଲଫିଲ୍ଡସ ଲିମିଟେଡ୍  
 Mahanadi Coalfields Limited  
 (A subsidiary of Coal India Limited)

Office of The General Manager  
 Basundhara Area  
 ATPO: Basundhara-770078  
 Dist: Sundargarh (Orissa)



Annexure-IV

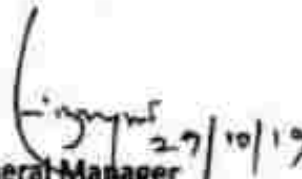
**UNDERTAKING TO DEPOSIT EXTRA 25% OF CA COST FOR SOIL AND MOISTURE  
 CONSERVATION (SMC) ACTIVITIES**

(Condition No.(iii))

We do hereby undertake that 25% cost of CA land has already been included in the CA Scheme. However, we also agree to deposit extra 25% of CA cost for soil and moisture conservation (SMC) activities on the CA land on demand of the concerned Divisional Forest Officer, if required.

  
 20/11/2015

Project Officer  
 Kulda Opencast Project  
 परियोजना अधिकारी  
 कुल्डा परियोजना

  
 27/10/19  
 General Manager  
 Basundhara Area  
 General Manager  
 MCL, Basundhara Area

  
 Divisional Forest Officer  
 Sundargarh Division

**AGENCY COPY**  
**MSFT / RTGS CHALLAN for ANVIC CAMPA**  
 Date : 25-10-2018

Agency Name.	MCL
Application No.	071648689
MSFT/RTGS Ptn No.	6-1781887-FC VOL.
Location.	ORISSA
Address.	Jagriti Vihar/Bhubaneswar
Payment(In Rs.)	25814000/-

Amount in Words: Two Crore Fifty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only

~~NEFT/RTGS to be made for following details:~~

Beneficiary Name:	ORISSA CAMP
IFSC Code:	COOPOR007
Pay to Account No.	100002710000000000000000 Valid only for this challan amount.
Bank Name & Address:	Cooperative Bank Ltd/Complex Branch, Block 11, CMO Complex, Phase I, Laxmi Road, New Delhi - 110003

- This Challan is strictly to be used for making payment to CAMPA by MSFT/RTGS only.
- This challan is valid only for seven days.

After making successful payment, User Agencies may Email: [helpdesk@campa@corpbank.co.in](mailto:helpdesk@campa@corpbank.co.in)

581N119298637318

*[Signature]*  
 Suresh Chandra

*[Signature]*  
 Divisional Forest Officer  
 Sundergarh Division

8672881 R.K. SETHI  
 SBI BALINGA BRANCH  
 CASH  
 25 OCT 2018  
 Journal No:  
 Cheque No:

SIORISHA JUNA MARGADH  
 SBI BALINGA BRANCH  
 CASH  
 25 OCT 2018  
 Journal No:  
 Cheque No:

AGENCY COPY	
<b>NEFT / RTGS CHALLAN for A6-HOC CAMPA</b>	
Date : 25-10-2019	
Agency Name.	BCI
Application No.	671648888
NEFT/RTGS File No.	8-1791987-PC VOL.
Location.	ORISSA
Address.	Jagnul Vihar Bembalpur
Amount(In Rs)	23014840/-
Amount In Words :Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	COOP0000371
Pay to Account No.	160326716488888 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11,CGO Complex, Phase I, Lodhi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

BANK COPY	
<b>NEFT / RTGS CHALLAN for A6-HOC CAMPA</b>	
Date : 25-10-2019	
Agency Name.	BCI
Application No.	671648888
NEFT/RTGS File No.	8-1791987-PC VOL.
Location.	ORISSA
Address.	Jagnul Vihar Bembalpur
Amount(In Rs)	23014840/-
Amount In Words :Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	COOP0000371
Pay to Account No.	160326716488888 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11,CGO Complex, Phase I, Lodhi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

After making successful payment, User Agencies may send a line of confirmation through Email: [helpdeskcampa@corpfnab.co.in](mailto:helpdeskcampa@corpfnab.co.in)




*d*  
Divisional Forest Officer  
Bargarh Division

AGENCY COPY	
NEFT / RTGS CHALLAN for AS-HOC CAMPA	
Date : 26-10-2011	
Agency Name	MCL
Application No.	071040008
MasterFile No.	0-1791987-FC VOL.
Location	ORISSA
Address	Jagriti Vihar Bhubaneswar
Amount(In Rs)	23014000-
Amount in Words :Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	COOP0000271
Pay to Account No.	1800071040000 Valid only for this challan amount.
Bank Name & Address:	Cooperative Bank Lathi Complex Branch, Block 11,CGO Complex, Phase I, Lathi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

BANK COPY	
NEFT / RTGS CHALLAN for AS-HOC CAMPA	
Date : 26-10-2011	
Agency Name	MCL
Application No.	071040008
MasterFile No.	0-1791987-FC VOL.
Location	ORISSA
Address	Jagriti Vihar Bhubaneswar
Amount(In Rs)	23014000-
Amount in Words :Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	COOP0000271
Pay to Account No.	1800071040000 Valid only for this challan amount.
Bank Name & Address:	Cooperative Bank Lathi Complex Branch, Block 11,CGO Complex, Phase I, Lathi Road, New Delhi -110003
<ul style="list-style-type: none"> <li>This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only</li> <li>This challan is valid only for seven days.</li> </ul>	

After making successful payment, User Agencies may send a line of confirmation through Email: [helpdeskcampa@corpbank.co.in](mailto:helpdeskcampa@corpbank.co.in)

Print Back

  
Divisional Forest Officer  
Bundargarh Division

**AGENCY COPY**  
**NEFT / RTGS CHALLAN for AMRICO CAMPA**  
 Date : 25-10-2019

Agency Name.	SCL
Application No.	671948000
MUTFIS File No.	8-1781867-FC VOL.
Location.	ORPBA
Address.	Jangal Vihar/Banaboli
Amount(In Rs)	82914340

Amount in Words (Two Crore Thirty Lakh Fourteen Thousand Five Hundred and Forty Rupees Only)

**NEFT/RTGS to be made as per following details.**

Beneficiary Name:	ORPBA CAMPA
IFSC Code:	COOP0000271
Pay to Account No.	1800071000000 Valid only for this challan amount.
Bank Name & Address:	Cooperation Bank Local Complex Branch, Block 11, CBO Complex, Phase 1, Lodi Road, New Delhi -110003

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only
- This challan is valid only for seven days.

After making successful payment, User Agencies may Email: [helpdeskcompa@corphank.co.in](mailto:helpdeskcompa@corphank.co.in)

581N119292637318

*Signature*

*Somnath Singh*

*Signature*

Divisional Forest Officer  
Bundargarh Division

5872651 | R.K. SETHI  
SBI BALINGA BRANCH  
CASH  
25 OCT 2019  
Journal No :  
CHSL No. 77 No :

SHRISHRUTI SINGH MARIANI  
SBI BALINGA BRANCH  
CASH  
25 OCT 2019  
Journal No :  
CHSL No. 77 No :

Annexure-IX(C)

AGENCY COPY



NEFT / RTGS CHALLAN for CAMPA Funds

Date: 13-03-2023

SBI NR 52025021525454052

Agency Name	MOI
Application No.	871988888
NEFT/RTGS Pk No.	8-17871987-PC VOL
Location	CHENNAI
Address	Jagral Vihar/Sambalpur
Account No	88888888

Amount in Words: Sixty-five Lakh Three Thousand Six Hundred and Eighty-Four Rupees Only

CH No. 224731, dt. 15.03.2023

NEFT/RTGS to be made as per follow details:

Beneficiary Name	CHENNAI CAMPA
IFSC Code	UBIN0002208
Pay to Account No.	1200071000000 Valid only for this challan amount.
Bank Name & Address	Union Bank of India PCB Centre, 217, 81st Jallikattu Road, Madhav Road, Bangalore-560022

This Challan is strictly to be used for money payment to CAMPA by NEFT/RTGS only

Note: After making the required payment even after 7 working days, then kindly mail to Email: [feedback@unionbankoffunds.bank](mailto:feedback@unionbankoffunds.bank) or [ubid000710@unionbankoffunds.bank](mailto:ubid000710@unionbankoffunds.bank)

*[Handwritten signatures]*  
SL. BACU/SHIFA A.



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

Office of The General Manager  
 Basundhara Area  
 ATPO-Basundhara-770075  
 Dist-Sundargarh (Orissa)




**MCL**


Annexure-X

**UNDERTAKING TO PAY ADDITIONAL AMOUNT OF NPV, IF SO DETERMINED, AS PER THE FINAL DECISION OF HON'BLE SUPREME COURT OF INDIA**

(Condition No.(viii))

We do hereby undertake to pay the additional amount of Net Present Value (NPV) at the present rate, if so determined, as per the final decision of the Hon'ble Supreme Court of India.

  
 General Manager  
 Basundhara Area  
 General Manager  
 MCL, Basundhara Area

  
 Divisional Forest Officer  
 Sundargarh Division

DISTRICT OFFICE, SUNDARGARH  
(REVENUE SECTION)No. 1738 DT. 14/9/2016B2  
2194F  
15-9-16  
D  
17/9

To

The Divisional Forest Officer,  
Sundargarh Division,

Sub:

Diversion of 29.41 ha. of entire forest land including reserved forest in village Balinga, Bankibahal and Kuisira for non forest use for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd under Hemgir Tahsil.

Sir,

With reference to the subject cited above, I am to furnish herewith the certificate regarding compliance of Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Rights) Act 2006 in respect of diversion of forest land measuring 29.41 ha. of entire forest land including reserved forest in village Balinga, Bankibahal and Kuisira for non forest use for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd. under Hemgir Tahsil, along with the copy of Pali Sabha Meeting resolution of village Balinga, Bankibahal and Kuisira for taking further necessary action at your end.

Yours faithfully,

U 14/9/2016  
Addl. District Magistrate,  
Sundargarh.

Memo No. 1739 Dt. 11/09/2016

Copy forwarded to Special Secretary to Govt. Forest & Environment Deptt., Govt. of Odisha, Bhubaneswar / Addl. Principal Chief Conservator of Forest, Forest Diversion & Nodal officer, FC Act, Bhubaneswar / General Manager, Basundhara & Sirmal Area of MCL, Basundhara information and necessary action.

U 14/9/2016  
Addl. District Magistrate,  
Sundargarh.

3/33  
22-9-16

### CERTIFICATE

REGARDING COMPLIANCE OF SCHEDULED TRIBES & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHT) ACT, 2006 IN RESPECT OF DIVERSION OF REVENUE FOREST LAND MEASURING 24.68 HA. IN VILLAGE BANKIBAHAL, 1.82 HA. IN VILLAGE BALINGA AND 1.53 HA IN VILLAGE KUISIRA AND RESERVE FOREST LAND MEASURING 1.37 HA IN VILLAGE KUISIRA FOR CONSTRUCTION OF BASUNDHARA COAL WASHERY OF MAHANADI COALFIELDS, LIMITED UNDER HEMGIR TAHSIL.


1. It is certified that the complete process for identification and settlement of rights under the Scheduled Tribes & Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 has been carried out for the entire Forest area including reserve forest area of 29.41 hectares proposed for diversion in village Bankibahal, Balinga and Kuisira for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd under Hemgir Tahsil. The concerned record of all consultations and meetings held are annexed in shape of Pali Sabha Resolution dt.29.4.2016 of village Bankibahal and Balinga and dated 8.7.2016 of village Kuisira and enquiry report of Tehsildar, Hemgir.
2. It is certified that the proposals for such diversion has been placed before the Pali Sabha of forest dwellers of village Bankibahal, Balinga and Kuisira under the Chairmanship of Smt. Padmini Majhi, Sarpanch of Balinga G.P and in presence of more than 50% of members of Pali Sabha and members of Village Forest Committee where the details of the projects and its implication have been explained to them in vernacular/ local language.
3. It is certified that discussions and decisions on such proposals had taken place only when there was quorum of minimum 50% of the members of the Pali Sabha present.
4. It is certified, on the basis of the verification report and Pali Sabha Resolution dt. 29.4.2016 in village Bankibahal and Balinga and 8.7.2016 of village Kuisira that no such primitive Tribal groups and pre-agricultural communities were in occupation of the forest land proposed for diversion and whose forest rights are required to be specifically safeguarded as per section 3(1)(e) of the Forest Rights Act, 2006.
5. It is certified on the basis of the verification report and Pali Sabha Resolution dt. 29.4.2016 of village Bankibahal and Balinga and dated 8.7.2016 of village Kuisira that no such facilities managed by Government requiring diversion of Forest land U/s 3(2) of the Forest Rights Act, 2006 exist over the forest land proposed for diversion.

  
COLLECTOR, SUNDERGARH  
CHAIRMAN, D.L.C  
COLLECTOR  
SUNDERGARH

Annexure-I

LAND SCHEDULE


Sl. No.	Name of Village	Khata No.	Plot No.	Classification	Required Area		Already diverted as per statement of GM, MCL, BG Area	
					In Acre	In Ha.	In Acre	In Ha.
1	Bankibahal	57 (AJA)	370/p	Jungle	5.14	2.080	17.89	7.239
			395/p	Jungle	22.56	9.129	3.18	1.286
			398/p	Jungle	5.32	2.152	0	0
			402/p	Jungle	2.14	0.868	0	0
			412/p	Jungle	2.50	1.011	0	0
			414/p	Jungle	2.02	0.817	0	0
			444	Jungle	0.25	0.101	0	0
		<b>Total</b>	<b>7 Plots</b>		<b>39.93</b>	<b>16.156</b>	<b>21.07</b>	<b>8.52</b>
2	Kuisira	64 (AJA)	216/p	Jungle	0.34	0.137	0	0
			475/p	Jungle	0.43	0.174	0	0
			479/p	Jungle	2.80	1.133	0	0
			481/p	Jungle	0.21	0.084	0	0
		<b>Total</b>	<b>4 plots</b>		<b>3.78</b>	<b>1.528</b>	<b>0</b>	<b>0</b>
3	Balinga	121 (AJA)	1	Patra Jungle	2.94	1.189	0	0
			20/p	Patra Jungle	0.83	0.335	0	0
			21/p	Patra Jungle	0.08	0.032	0	0
			25/p	Patra Jungle	0.65	0.263	0	0
		<b>Total</b>	<b>4 plots</b>		<b>4.50</b>	<b>1.82</b>	<b>0</b>	<b>0</b>
4	Kuisira			Reserve Forest	3.40	1.37	0	0
	<b>Grand Total</b>			<b>29.41 Hectares</b>	<b>51.61</b>	<b>20.89</b>	<b>21.07</b>	<b>8.52</b>

  
COLLECTOR, SUNDARGARH.  
CHAIRMAN, D.L.C.  
COLLECTOR  
SUNDARGARH

Annexure-II

List of Beneficiary to whom Title under FRA have been issued in village  
Kuisira

Sl. No.	Name of the Title Holder	Khata No.	Plot No.	Kisam	Area in Ha.
1	Matual Badek S/o- Kansu Badek	84 (AJA)	475/p	Jungle	0.174
			479/p	Jungle	1.133
			481/p	Jungle	0.084
		<b>Total</b>			<b>1.391</b>

  
COLLECTOR, SUNDARGARH  
CHAIRMAN, D.L.C.  
COLLECTOR  
SUNDARGARH

# Risk Assessment Plan for Basundhara Washery

## 1. Introduction

### Objective:

To identify, evaluate, and mitigate risks associated with the operation of Basundhara Washery, ensuring safe and efficient operations while adhering to environmental regulations and sustainability goals.

### Scope:

This plan covers risk assessment for the coal washery operation, including water management, slime pond management, equipment operation, and overall environmental impact.

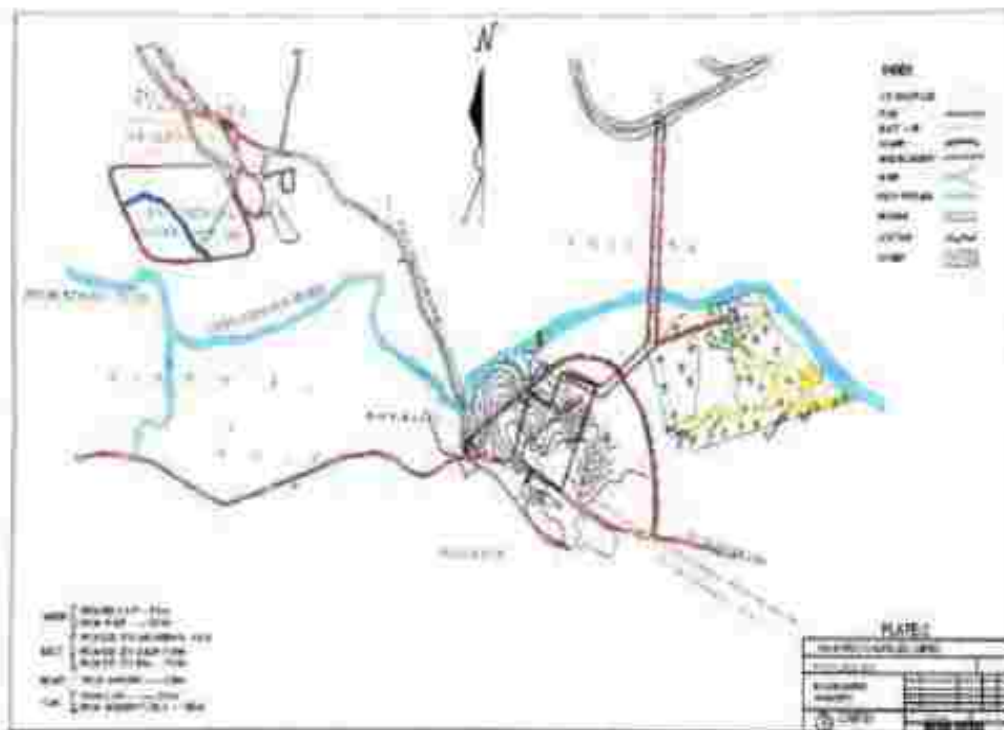


Fig 01: Location plan of Basundhara Washery

## 2. Risk Identification

### 2.1 Environmental Risks

- **Water Contamination:** Risk of potential contamination of treated water or failure of the closed water circuit.
- **Slime Pond Failure:** Risk of overflow, leakage, or structural failure of slime ponds.
- **Effluent Quality:** Risk of inefficiency in the treatment process leading to inadequate quality of treated effluents.

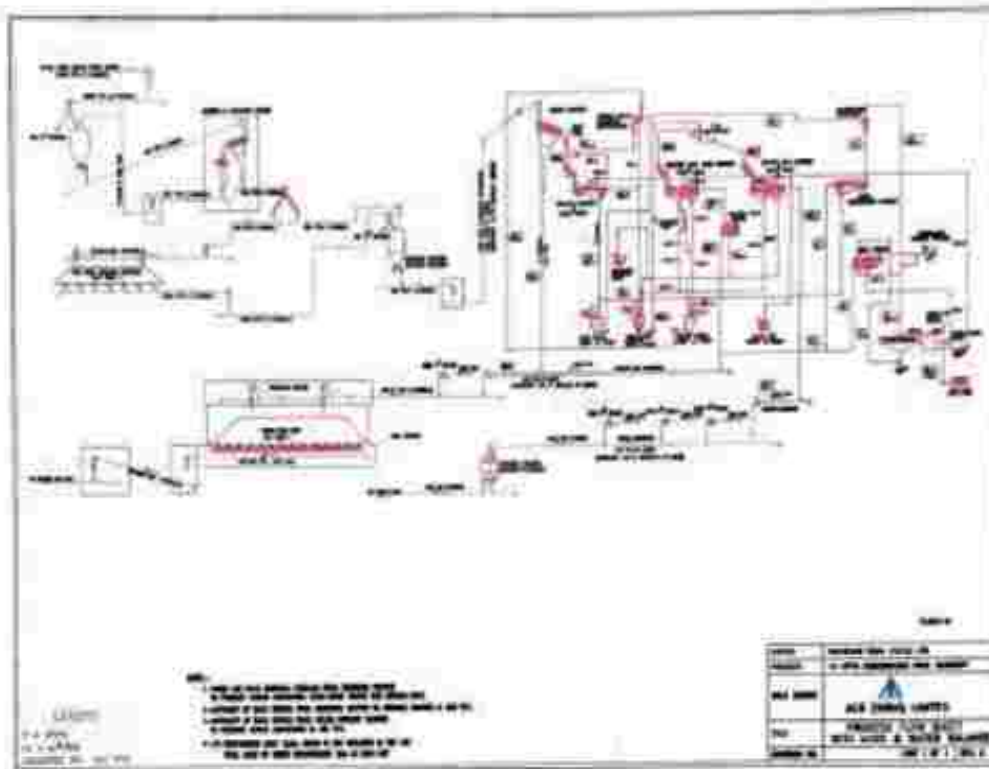


Fig 02 : Process flow sheet with Mass & Water Balance

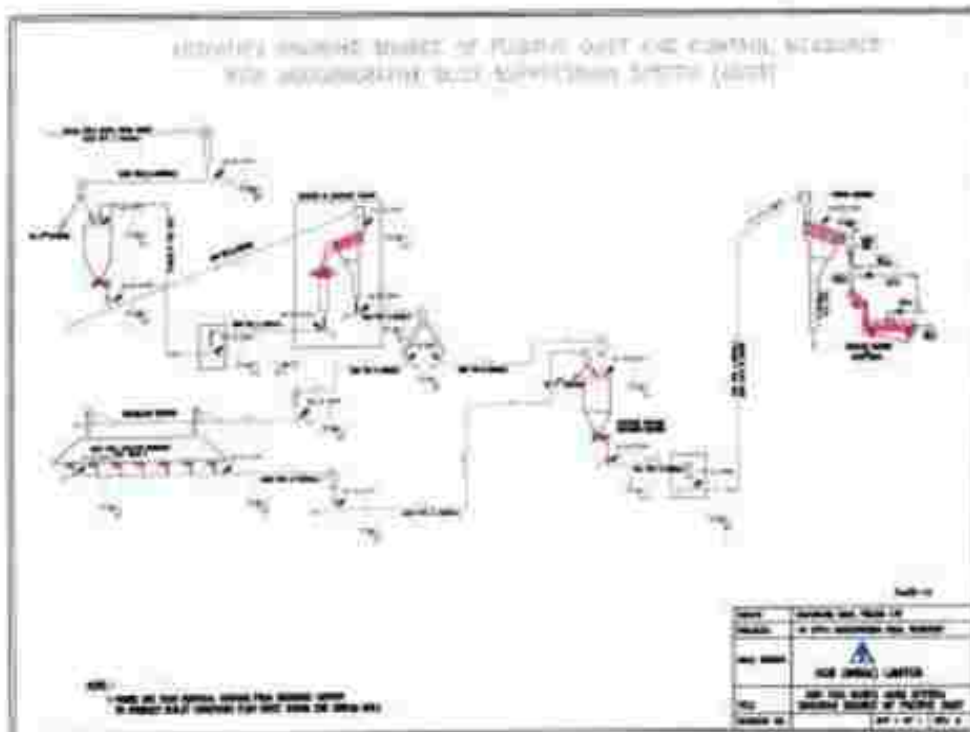


Fig 03 : Activities showing source of Fugitive dust and control measures with agglomerative Dust Suppression System (ADSS)

## 2. Risk Identification

### 2.1 Environmental Risks

- **Water Contamination:** Risk of potential contamination of treated water or failure of the closed water circuit.
- **Slime Pond Failure:** Risk of overflow, leakage, or structural failure of slime ponds.
- **Effluent Quality:** Risk of inefficiency in the treatment process leading to inadequate quality of treated effluents.

### 2.2 Operational Risks

- **Equipment Failure:** Risk of breakdown or malfunction of critical equipment such as pumps, crushers, and washery machinery.
- **Operational Hazards:** Risk associated with handling coal, chemicals, and other operational materials.
- **Human Error:** Risk of accidents or errors in operation due to inadequate training or oversight.

### 2.3 Health and Safety Risks

- **Worker Safety:** Risks related to exposure to dust, noise, and other hazardous conditions.
- **Emergency Situations:** Risks associated with fire, explosion, or chemical spills.

### 2.4 Compliance Risks

- **Regulatory Non-Compliance:** Risk of failing to meet environmental regulations or safety standards.
- **Permit Violations:** Risks related to violations of operational permits or environmental clearance conditions.

## 3. Risk Evaluation

### Likelihood and Impact Assessment:

Evaluate the likelihood and potential impact of each identified risk on a scale of Low, Medium, High.

Risk	Likelihood	Impact	Risk Rating
Water Contamination	Medium	High	High
Slime Pond Failure	Low	High	Medium
Effluent Quality	Medium	Medium	Medium
Equipment Failure	Medium	High	High
Operational Hazards	Medium	Medium	Medium
Human Error	Medium	High	High
Worker Safety	Low	High	Medium
Emergency Situations	Low	High	Medium
Regulatory Non-Compliance	Low	High	Medium
Permit Violations	Low	Medium	Low

## 4. Risk Mitigation Strategies

### 4.1 Environmental Risks

- **Water Contamination:** Implement regular monitoring and maintenance of water quality. Ensure redundancy in critical systems.
- **Slime Pond Failure:** Conduct regular inspections and maintenance of slime ponds. Install high-level alarms and overflow containment systems.
- **Effluent Quality:** Utilize advanced treatment technologies and conduct regular quality checks. Ensure proper calibration and maintenance of treatment equipment.

### 4.2 Operational Risks

- **Equipment Failure:** Establish a preventative maintenance program and conduct regular equipment inspections. Maintain a spare parts inventory for critical components.
- **Operational Hazards:** Provide appropriate personal protective equipment (PPE) and implement standard operating procedures (SOPs) for handling materials.
- **Human Error:** Offer regular training and competency assessments for employees. Implement a robust safety management system and error reporting mechanism.

### 4.3 Health and Safety Risks

- **Worker Safety:** Conduct regular health and safety audits. Implement noise and dust control measures. Provide health surveillance and first aid training.
- **Emergency Situations:** Develop and implement emergency response plans and conduct regular drills. Install fire suppression systems and ensure accessibility to emergency exits.

### 4.4 Compliance Risks

- **Regulatory Non-Compliance:** Stay updated on regulatory requirements and ensure all operations comply with current regulations. Regularly review compliance through internal audits.
- **Permit Violations:** Maintain all required permits and ensure compliance with their conditions. Regularly review and update permits as necessary.

## 5. Monitoring and Review

- **Regular Monitoring:** Implement continuous monitoring of critical parameters such as water quality, equipment performance, and safety conditions.
- **Periodic Reviews:** Conduct regular risk assessments and reviews of the risk management plan to ensure its effectiveness and relevance.
- **Reporting:** Establish a system for reporting and documenting incidents, near-misses, and deviations from the risk management plan.

## 6. Conclusion

Effective risk management at Basundhara Washery is crucial for maintaining safe and efficient operations while ensuring environmental sustainability. This Risk Assessment Plan provides a structured approach to identifying and mitigating risks, enhancing overall safety, and ensuring compliance with regulatory requirements.

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

Office of The General Manager  
 Basundhara Area  
 AT/PO-Basundhara-750076  
 Dist-Sundargarh (Orissa)



**MCL**

Annexure-XIV

UNDERTAKING FOR DIVERSION OF THE 29.41 HA FOREST LAND UNDER THIS APPROVAL SHALL BE FOR A PERIOD CO-TERMINUS WITH THE PERIOD OF MINING LEASE PROPOSED.

(Condition No.(xiii))

We do hereby undertake that the period of diversion of the 29.41 ha forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended and the Rules framed there-under.

*HB*  
 20/11/2025  
 Project Officer  
 Kulda Opencast Project  
 ପରିସଫଳନା ଅଧିକାରୀ  
 କୁଲଡା ପରିସଫଳନା

*[Signature]*  
 29/10/19  
 General Manager  
 Basundhara Area  
 General Manager  
 MCL, Basundhara Area

*[Signature]*  
 Divisional Forest Officer  
 Sundargarh Division

**41<sup>st</sup> meeting of EAC for Thermal & Coal Mining Sector held on 13-14 December, 2018**

**Minutes of the 41<sup>st</sup> meeting of the Expert Appraisal Committee (EAC) held during 13-14 December, 2018 for appraisal of coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3**

The 41<sup>st</sup> meeting of the Expert Appraisal Committee (EAC) for Coal mining projects was held during 13-14 December, 2018 in the Ministry of Environment, Forest & Climate Change at Indus Meeting Hall, Jal Wing, Ground Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi to consider the proposals relating to coal mining sector. The following members were present:

1.	Dr. Navin Chandra	-	Chairman
2.	Dr. N. P. Shukla		Member
3.	Dr. Sharachchandra Lele		Member
4.	Dr. G.P. Kundargi	-	Member
5.	Shri N. Mohan Karnat	-	Member
6.	Dr. Jai Krishna Pandey	-	Member
7.	Shri N. S. Mondal	-	Member (Representative of CEA)
8.	Dr. R. K. Giri	-	Member (Representative of IMD)
9.	Shri S. K. Srivastava	-	Member Secretary

**Confirmation of minutes**

There being no comments from any of the members of the Committee, minutes of the 40<sup>th</sup> meeting of the EAC held on 26<sup>th</sup> October, 2018 were confirmed in the presence of the members who had been present in the 40<sup>th</sup> meeting.

Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

**Agenda No.41.1**

**Expansion of Penganga Opencast Coal Mining Project from 4.50 MTPA to 6.3 MTPA capacity in an area of 763.06 ha of M/s Western Coalfields Ltd located in village Wirur, Tehsil Korpana, District Chandrapur (Maharashtra) - For Environmental Clearance**

[IA/MH/CMIN/86684/2018; F. No. J-11015/46/2009-IA-II(M)]

**41.1.1** The proposal is for environmental clearance for expansion of Penganga Opencast Coal Mining Project from 4.50 MTPA to 6.30 MTPA capacity in an area of 763.06 ha of M/s Western Coalfields Ltd located in village Wirur, Tehsil Korpana, District Chandrapur (Maharashtra).

**41.1.2** Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

(i) The project area is covered under Survey of India Topo Sheet No 56M/1 and is bounded by the geographical coordinates ranging from 19°50'24" to 19°52'02" N and longitudes 79°06'56" E and 79°09'16" E.

(ii) Coal linkage of the project is proposed for MahaGenco use and for various Consumers

(iii) Joint venture cartel has not been formed.

(iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.

(v) Employment generation: Employment to total 670 nos. (Permanent Manpower- 460 nos., Contractual Manpower- 210 nos) persons will be provided from the project.

- mine sump water of abandoned quarry of Kathara OC mine. No surface or ground water shall be used in coal washery operation.
- Study shall be carried for sustenance of water supply to cater to projected demand of the proposed washery from the abandoned mine(s) throughout planned life of the washery.
  - Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted.
  - Ash content below 34% should be maintained in washed coal to be transported beyond 500 km for use in thermal power plants.
  - The washing technology so chosen should conform to 'Zero Liquid Discharge'.
  - Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
  - For proper baseline air quality assessment, adequate monitoring stations in the downwind areas based on wind rose pattern of the area, shall be set up for collection of air quality data and air quality modeling.
  - Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.
  - Thick green belt of adequate width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.

#### **Agenda No.41.16**

**Basundhara Coal Washery of 10 MTPA of M/s Mahanadi Coalfields Ltd, located in District Sundergarh (Odisha) - For Environment Clearance**

**[IA/OR/CMIN/20520/2013; F. No. J-11015/435/2013-IA-II(M)]**

**41.16.1** The proposal is for grant of environment clearance to Basundhara Washery of 10 MTPA capacity in an area of 43.90 ha of M/s Mahanadi Coalfields Limited located in village Balinga, Bankibahal & Kusharain Tehsil Hingir District Sundargarh (Odisha).

**41.16.2** The proposal was earlier considered in the 1<sup>st</sup> EAC meeting held on 27<sup>th</sup> December, 2016, wherein the proposal was deferred for want of inputs in respect of following:

- (i) Mine closure activities already undertaken in respect of Basundhara (East) Coal mine has to be in conformity with the approved mining plan, conditions stipulated in EC in this regard, if any, and the other relevant statutory provisions.
- (ii) Basundhara (East) coal mine is reported to be abandoned and the total process water requirement of 2222 cum/day for coal beneficiation has been proposed to be utilized from the abandoned mine through 3.5 km long pipeline. Detailed study regarding sustenance of water availability throughout life of the washery has not been substantiated by the project proponent.
- (iii) Firm schedule for obtaining stage-I forest clearance for 29.41 ha of forest land.

The proposal was further considered by the EAC in its meeting held on 27- 28 February, 2016. It was observed that the project proponent shall be required to formulate an action plan for implementation of activities of mine closure status report, which would essentially take care of restoration/reclamation of the abandoned mine and thus the management of mine water also. The EAC, after deliberations, decided not to recommend the proposal, but to wait for the firm action plan to be submitted adequately addressing the requirements contained in the mine closure status report.

**41.16.3** In response to the observations of EAC, the details submitted by the project proponent during the meeting, are as under:-

- (i) The Mine Closure Status Report has been approved by the Company Board in its 205<sup>th</sup> meeting held on 23<sup>rd</sup> October 2018.
- (ii) A copy of the approved Mine Closure Status Report has been submitted to MoEF&CC.
- (iii) The time line for implementation of the action plan for incomplete/ partially complete requirements as contained in the Mine Closure Status Report has been prepared and is under implementation as given below:

Sl.No	Work / Activity	Timeline For Completion
i	Reclamation of mined out area	Total Reclaimed Area : 21.09 Ha Plantation already done : 8.68 Ha Plantation proposed : 11.29 Ha (To be taken up in 2019-20)
ii	Restoration of external OB dump	Total area of External Dump: 11 Ha Plantation already done : 7.78 Ha Plantation proposed : 3.28 Ha (To be taken up in 2019-20)
iii	Restoration of road	Concreting of road Total length : 4050m Work completed : 3700m Balance : 350m (to be completed by 31.03.2019)
iv	Fencing of mine	Total length : 3560 m Fencing already done : 400 m Proposed fencing : 3160 m (to be completed by 31.12.2019)

- (iv) The forest diversion proposal for 29.41 ha is in advance stage for grant of Stage-I forest clearance. Three point compliance sought by MoEF&CC, New Delhi has been submitted on 15.11.2018 vide letter no.244458 dated 12.11.2018.

41.16.4 During deliberations, the EAC noted the following:

The proposal is for environmental clearance to Basundhara Washery of 10 MTPA capacity in an area of 43.90 ha of M/s Mahanadi Coalfields Limited located in village Balinga, Bankibahal & Kushara in Tehsil Himgir District Sundargarh (Odisha).

Project involves 29.41 ha of forest land. Proposal for diversion of said forest land for non-forestry use has been submitted.

ToR for the project was granted on 30<sup>th</sup> September, 2014, followed by amendment therein vide letter dated 29<sup>th</sup> February, 2016 due to change in layout. Public hearing was conducted by the SPCB on 27<sup>th</sup> July, 2016.

The Mine Closure Status Report has been approved by the Company Board in its 205<sup>th</sup> meeting held on 23<sup>rd</sup> October 2018 which specifies timelines for implementation of the action plan for carrying out incomplete/partially complete activities for mine closure of Basundhara (East) coal mine. The action plan is under implementation.

Of the total raw coal input of 10 MTPA at 43.8 ± 4% ash content, the details of different products proposed from the washery, would be as under-

Product	Wlight (MT)	Ash (%)
---------	-------------	---------

Washed/clean coal	7.456	33.5
Rejects	2.5	<65

The washery will be based on wet process using heavy media separation with raw coal linkage from Kulda Opencast coal mining project (10 MTPA).

Transportation of washed coal is proposed by rail (Rapid loading system with Silo). The rejects from the washery is proposed to be disposed off in FBC power plants, E-suction of coal or MoU Route and backfilling in mine void.

Total fresh water requirement is estimated to be 2222 cum/day, which is proposed to be met from mine water of abandoned quarry of nearby Basundhara (East) OC mine. No surface or ground water shall be used to meet water demand for the proposed industrial operations.

**41.16.5** The Committee, after deliberations, recommended the project for grant of environment clearance to Basundhara Washery of 10 MTPA capacity in an area of 43.90 ha of M/s Mahanadi Coalfields Limited located in villages Balinga, Bankibahal & Kusharain, Tehsil Himgir District Sundergerh (Odisha), subject to submission of stage-I forest clearance for 29.41 ha of forest land and certain other conditions, in addition to the standard conditions for coal washery as specified at Annexure-XVII of this Ministry's OM No. 22-34/2018-IA.III dated 9<sup>th</sup> August, 2018, as under:-

- Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.
- Total fresh water requirement shall not exceed 2222 cum/day, proposed to be met from mine sump water of abandoned quarry of Basundhara (East) OC mine. No surface or ground water shall be used in coal washery operation.
- Study shall be carried for sustenance of water supply to cater to projected demand of the proposed washery from the abandoned mine(s) throughout planned life of the washery.
- Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted.
- Ash content below 34% should be maintained in washed coal to be transported beyond 500 km for use in thermal power plants.
- The washing technology so chosen should conform to 'Zero Liquid Discharge'.
- Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- The project proponent shall reduce the time line for implementation of the action plan for carrying out incomplete/partially complete activities contained in mine closure of Basundhara (East) coal mine.
- For proper baseline air quality assessment, adequate monitoring stations in the downwind areas based on wind rose pattern of the area, shall be set up for collection of air quality data and air quality modeling.
- Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.
- Thick green belt of adequate width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.

#### DISCUSSION ON ANY OTHER ITEM

#### Agenda No.41.17

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

Office of The General Manager  
 Basundhara Area  
 ATPO - Basundhara-770076  
 Dist - Sundargarh (Orissa)



**MCL**

Annexure-XVI

**UNDERTAKING THAT NO LABOUR CAMP SHALL BE ESTABLISHED**

(Condition No.(xv))


We do hereby undertake that no labour camp shall be constructed/ established on the forest land. It is also agreed to provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas.

  
 General Manager 29/10/19  
 Basundhara Area  
 General Manager  
 MCL, Basundhara Area

  
 Divisional Forest Officer  
 Sundargarh Division

**PATCH WISE COORDINATES & DISTANCE OF FOREST LAND REQUIRED FOR  
BASUNDHARA COAL WAHSERY.**

PNT_ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
1	83°45'11.66920"	22°02'08.16843"	784200.041	2439330.883	44.698	Dist (1 - 2)	Patch - A
2	83°45'13.18322"	22°02'08.51023"	784243.287	2439342.185	4.297	Dist (2 - 3)	
3	83°45'13.08025"	22°02'08.40888"	784240.389	2439339.013	45.529	Dist (3 - 4)	
4	83°45'12.94299"	22°02'06.93513"	784237.270	2439293.591	30.519	Dist (4 - 5)	
5	83°45'12.17579"	22°02'07.62190"	784214.878	2439314.327	22.231	Dist (5 - 1)	
6	83°45'02.58702"	22°02'15.94453"	783935.167	2439565.469	367.875	Dist (6 - 7)	Patch - B
7	83°45'09.14472"	22°02'26.21565"	784117.597	2439884.924	57.494	Dist (7 - 8)	
8	83°45'10.68419"	22°02'25.01983"	784162.425	2439848.924	34.039	Dist (8 - 9)	
9	83°45'09.49922"	22°02'25.07313"	784128.401	2439849.950	46.474	Dist (9 - 10)	
10	83°45'09.48749"	22°02'23.56314"	784128.903	2439803.479	48.381	Dist (10 - 11)	
**	83°45'09.55782"	22°02'21.99252"	784131.793	2439755.184	28.066	Dist (11 - 12)	
11	83°45'10.53516"	22°02'22.02964"	784159.811	2439756.832	49.047	Dist (12 - 13)	
12	83°45'10.64114"	22°02'23.62021"	784161.968	2439805.832	80.540	Dist (13 - 14)	
13	83°45'13.32838"	22°02'22.86405"	784239.480	2439783.955	136.398	Dist (14 - 15)	
14	83°45'16.03957"	22°02'26.50438"	784315.238	2439897.379	54.146	Dist (15 - 16)	
15	83°45'17.17129"	22°02'27.91222"	784346.922	2439941.287	26.705	Dist (16 - 17)	
16	83°45'17.97954"	22°02'27.48201"	784370.349	2439928.468	3.191	Dist (17 - 18)	
17	83°45'17.98196"	22°02'27.37837"	784370.476	2439925.280	28.592	Dist (18 - 19)	
18	83°45'17.92587"	22°02'26.45279"	784369.381	2439896.769	36.287	Dist (19 - 20)	
19	83°45'17.49485"	22°02'25.34437"	784357.632	2439862.437	26.315	Dist (20 - 21)	
20	83°45'17.07910"	22°02'24.58226"	784346.128	2439838.770	30.057	Dist (21 - 22)	
21	83°45'18.12293"	22°02'24.49995"	784376.119	2439836.778	38.934	Dist (22 - 23)	
22	83°45'18.71572"	22°02'25.63787"	784392.493	2439872.101	16.594	Dist (23 - 24)	
23	83°45'18.92269"	22°02'26.14133"	784398.151	2439887.701	20.762	Dist (24 - 25)	
24	83°45'19.50896"	22°02'26.53673"	784414.750	2439900.172	98.296	Dist (25 - 26)	
25	83°45'22.44014"	22°02'24.88368"	784499.760	2439850.823	10.400	Dist (26 - 27)	
26	83°45'22.77594"	22°02'24.75643"	784509.464	2439847.081	33.839	Dist (27 - 28)	
27	83°45'22.40569"	22°02'23.71251"	784499.422	2439814.766	18.683	Dist (28 - 29)	
28	83°45'22.81103"	22°02'23.23744"	784511.315	2439800.357	8.587	Dist (29 - 30)	
29	83°45'23.04294"	22°02'23.41378"	784517.870	2439805.904	28.371	Dist (30 - 31)	
30	83°45'23.04776"	22°02'24.33561"	784517.496	2439834.273	8.618	Dist (31 - 32)	
31	83°45'23.06213"	22°02'24.61531"	784517.753	2439842.887	30.518	Dist (32 - 33)	
32	83°45'23.95900"	22°02'24.08230"	784543.779	2439826.950	20.507	Dist (33 - 34)	
33	83°45'24.54622"	22°02'23.70251"	784560.837	2439815.568	275.828	Dist (34 - 35)	
34	83°45'19.00138"	22°02'16.38151"	784405.832	2439587.413	236.894	Dist (35 - 36)	
35	83°45'14.22562"	22°02'10.10289"	784272.308	2439391.734	67.195	Dist (36 - 37)	
36	83°45'11.95606"	22°02'10.64099"	784206.898	2439407.117	33.055	Dist (37 - 38)	
37	83°45'10.81584"	22°02'10.48783"	784174.271	2439401.814	46.759	Dist (38 - 39)	
38	83°45'09.79714"	22°02'11.67365"	784144.387	2439437.777	35.362	Dist (39 - 40)	
39	83°45'08.84774"	22°02'10.94109"	784117.556	2439414.743	134.931	Dist (40 - 41)	
40	83°45'05.29654"	22°02'13.81501"	784014.081	2439501.341	101.685	Dist (41 - 6)	

  
Divisional Forest Officer  
Sundargarh Division

**PATCH WISE COORDINATES & DISTANCE OF FOREST LAND REQUIRED FOR  
BASUNDHARA COAL WAHSEY.**

PMT ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
42	82°45'24.52136"	22°02'24.07844"	794559.924	2439827.006	45.643	Dist (42 - 43)	Patch - C
43	82°45'24.51446"	22°02'25.54896"	794558.899	2439879.439	188.987	Dist (43 - 44)	
44	82°45'25.83128"	22°02'26.89491"	794726.709	2439918.345	6.827	Dist (44 - 45)	
45	82°45'25.95135"	22°02'26.73356"	794714.215	2439911.643	12.870	Dist (45 - 46)	
46	82°45'26.33518"	22°02'26.48257"	794724.649	2439904.358	24.073	Dist (46 - 47)	
47	82°45'26.71157"	22°02'25.93424"	794707.792	2439886.922	40.273	Dist (47 - 48)	
48	82°45'26.22954"	22°02'24.73827"	794722.589	2439889.708	34.873	Dist (48 - 49)	
49	82°45'26.03141"	22°02'25.90419"	794719.259	2439915.387	12.958	Dist (49 - 50)	
50	82°45'26.13583"	22°02'25.19903"	794727.158	2439926.171	12.923	Dist (50 - 51)	
51	82°45'26.54968"	22°02'25.19107"	794731.496	2439794.812	211.805	Dist (51 - 52)	
52	82°45'25.84289"	22°02'25.50228"	794526.885	2439726.814	194.602	Dist (52 - 53)	
53	82°45'26.45151"	22°02'25.57127"	794524.461	2439729.549	25.828	Dist (53 - 54)	
54	82°45'24.22542"	22°02'25.10289"	794721.508	2439931.734	126.894	Dist (54 - 55)	
55	82°45'24.90028"	22°02'26.38111"	794495.432	2439587.413	275.828	Dist (55 - 56)	
56	82°45'24.58622"	22°02'25.70254"	794546.227	2439821.168	20.567	Dist (56 - 57)	
57	82°45'23.95907"	22°02'24.96120"	794541.779	2439826.950	16.127	Dist (57 - 58)	
58	82°45'23.18405"	22°02'25.28479"	794761.534	2439883.078	17.873	Dist (58 - 59)	
59	82°45'23.85136"	22°02'23.96838"	794761.758	2439817.788	5.960	Dist (59 - 60)	
60	82°45'23.14162"	22°02'23.82842"	794762.878	2439822.963	12.397	Dist (60 - 61)	
61	82°45'23.83585"	22°02'24.09607"	794741.056	2439831.022	17.812	Dist (61 - 62)	
62	82°45'23.91141"	22°02'24.47157"	794761.191	2439848.715	9.791	Dist (62 - 63)	
63	82°45'23.29478"	22°02'24.73752"	794733.773	2439811.179	37.648	Dist (63 - 64)	
64	82°45'23.14813"	22°02'25.86004"	794731.785	2439828.746	11.173	Dist (64 - 65)	
65	82°45'23.91603"	22°02'25.85117"	794761.877	2439845.104	17.674	Dist (65 - 66)	
66	82°45'23.14472"	22°02'25.16821"	794757.792	2439876.515	19.328	Dist (66 - 67)	
67	82°45'23.86774"	22°02'24.96967"	794758.713	2439857.232	11.931	Dist (67 - 68)	
68	82°45'23.83941"	22°02'25.96226"	794765.119	2439861.130	4.978	Dist (68 - 69)	
69	82°45'22.02115"	22°02'25.21284"	794774.445	2439845.501	20.827	Dist (69 - 70)	
70	82°45'22.66762"	22°02'24.90148"	794761.137	2439856.810	7.226	Dist (70 - 71)	
71	82°45'22.74273"	22°02'24.68311"	794793.546	2439849.997	31.843	Dist (71 - 72)	
72	82°45'22.08218"	22°02'24.52017"	794805.271	2439845.162	16.571	Dist (72 - 73)	
73	82°45'22.54967"	22°02'24.82682"	794818.506	2439855.142	7.571	Dist (73 - 74)	
74	82°45'23.72114"	22°02'24.65111"	794823.835	2439849.770	16.822	Dist (74 - 75)	
75	82°45'23.05030"	22°02'24.84867"	794821.858	2439855.767	24.911	Dist (75 - 76)	
76	82°45'23.46400"	22°02'25.48211"	794815.961	2439874.957	30.530	Dist (76 - 77)	
77	82°45'22.49600"	22°02'25.93347"	794786.514	2439888.527	7.566	Dist (77 - 78)	
78	82°45'22.20050"	22°02'26.10049"	794779.580	2439890.871	10.182	Dist (78 - 79)	
79	82°45'22.17301"	22°02'26.34949"	794778.137	2439900.276	22.844	Dist (79 - 80)	
80	82°45'21.35264"	22°02'26.47918"	794754.558	2439904.523	22.042	Dist (80 - 81)	
81	82°45'21.67071"	22°02'27.18627"	794757.551	2439926.361	8.220	Dist (81 - 82)	
82	82°45'21.21817"	22°02'27.31341"	794750.235	2439930.342	10.854	Dist (82 - 83)	
83	82°45'21.96048"	22°02'26.20858"	795056.820	2440024.846	15.103	Dist (83 - 84)	
84	82°45'21.83984"	22°02'25.34983"	795055.250	2440059.511	21.557	Dist (84 - 85)	
85	82°45'22.85839"	22°02'25.34269"	795076.147	2440054.987	2.494	Dist (85 - 86)	
86	82°45'22.74610"	22°02'25.16915"	795078.583	2440057.861	34.585	Dist (86 - 87)	
87	82°45'22.82236"	22°02'25.36125"	795084.160	2440091.589	6.981	Dist (87 - 88)	
88	82°45'22.35090"	22°02'25.24087"	795089.899	2440088.589	10.882	Dist (88 - 89)	
89	82°45'22.27380"	22°02'25.54681"	795096.045	2440097.498	13.281	Dist (89 - 90)	
90	82°45'23.01890"	22°02'25.82385"	795083.708	2440105.834	19.268	Dist (90 - 91)	
91	82°45'23.04487"	22°02'25.44940"	795086.899	2440125.080	25.173	Dist (91 - 92)	
92	82°45'23.82062"	22°02'25.06779"	795108.171	2440113.750	25.487	Dist (92 - 93)	
93	82°45'24.11231"	22°02'25.13951"	795121.200	2440085.171	15.467	Dist (93 - 94)	
94	82°45'24.84112"	22°02'25.03117"	795136.425	2440062.481	17.875	Dist (94 - 95)	
95	82°45'24.72876"	22°02'25.44674"	795135.711	2440066.782	18.773	Dist (95 - 96)	
96	82°45'24.18899"	22°02'25.12860"	795117.828	2440059.075	38.570	Dist (96 - 97)	
97	82°45'23.89672"	22°02'24.04824"	795112.428	2440030.885	5.204	Dist (97 - 98)	
98	82°45'24.07935"	22°02'24.02570"	795117.409	2440020.283	28.518	Dist (98 - 99)	
99	82°45'24.82371"	22°02'24.65967"	795136.761	2440030.438	68.794	Dist (99 - 100)	
100	82°45'24.77913"	22°02'25.46115"	795138.470	2439979.834	81.504	Dist (100 - 101)	
101	82°45'25.86945"	22°02'24.27752"	795220.149	2439948.505	34.444	Dist (101 - 102)	
102	82°45'26.11116"	22°02'25.46115"	795251.899	2439942.828	111.867	Dist (102 - 103)	
103	82°45'24.81356"	22°02'27.21586"	795140.349	2439927.277	244.465	Dist (103 - 104)	
104	82°45'25.96463"	22°02'24.82117"	794897.729	2439859.202	22.681	Dist (104 - 105)	
105	82°45'25.19848"	22°02'25.31855"	794944.403	2439876.874	1.534	Dist (105 - 106)	
106	82°45'25.19709"	22°02'25.23772"	794881.715	2439848.927	20.353	Dist (106 - 107)	
107	82°45'24.99320"	22°02'24.43449"	794954.127	2439848.221	118.280	Dist (107 - 108)	

Divisional Forest Officer  
Sundaraarh Division

**PATCH WISE COORDINATES & DISTANCE OF FOREST LAND REQUIRED FOR  
BASUNDHARA COAL WAHSEY.**

PNT_ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
105	83°45'42.88748"	22°02'33.72671"	785081.435	2440133.550	25.299	Dist (105 - 106)	Patch - F
106	83°45'42.25107"	22°02'33.15779"	785063.494	2440115.713	10.905	Dist (106 - 107)	
107	83°45'42.57880"	22°02'32.97844"	785072.997	2440110.364	8.106	Dist (107 - 108)	
108	83°45'42.52505"	22°02'32.71989"	785071.598	2440102.380	12.287	Dist (108 - 109)	
109	83°45'42.40988"	22°02'32.33538"	785068.509	2440090.488	8.328	Dist (109 - 110)	
110	83°45'42.19799"	22°02'32.15046"	785062.533	2440084.688	8.366	Dist (110 - 111)	
111	83°45'41.90673"	22°02'32.16259"	785054.170	2440084.910	82.565	Dist (111 - 112)	
112	83°45'41.79782"	22°02'34.84337"	785049.553	2440167.346	84.533	Dist (112 - 113)	
113	83°45'44.67212"	22°02'34.24145"	785132.351	2440150.306	33.622	Dist (113 - 114)	
114	83°45'44.65344"	22°02'33.14880"	785132.419	2440116.684	28.792	Dist (114 - 115)	
115	83°45'43.80427"	22°02'33.64721"	785107.780	2440131.580	27.865	Dist (115 - 116)	
116	83°45'43.09041"	22°02'34.26103"	785086.959	2440150.098	17.446	Dist (116 - 105)	

P_ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
117	83°45'52.61779"	22°02'28.55758"	785363.460	2439979.541	96.576	Dist (117 - 118)	Patch - F
118	83°45'55.97824"	22°02'28.38053"	785459.965	2439975.841	23.816	Dist (118 - 119)	
119	83°45'56.22513"	22°02'27.64176"	785467.460	2439953.235	106.386	Dist (119 - 120)	
120	83°45'52.51738"	22°02'27.63654"	785361.094	2439951.147	28.492	Dist (120 - 117)	

PNT_ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
121	83°45'40.95557"	22°02'59.64917"	785011.571	2440930.236	20.470	Dist (121 - 122)	Patch - RF
122	83°45'41.49555"	22°03'00.08389"	785026.818	2440943.894	32.462	Dist (122 - 123)	
123	83°45'42.10230"	22°03'00.97416"	785043.728	2440971.604	22.499	Dist (123 - 124)	
124	83°45'42.88043"	22°03'00.88334"	785066.100	2440969.214	13.452	Dist (124 - 125)	
125	83°45'43.02363"	22°03'01.29951"	785069.976	2440982.095	8.888	Dist (125 - 126)	
126	83°45'43.33311"	22°03'01.31203"	785078.847	2440982.641	12.714	Dist (126 - 127)	
127	83°45'43.50804"	22°03'00.93247"	785084.077	2440971.052	3.895	Dist (127 - 128)	
128	83°45'43.59993"	22°03'00.83933"	785086.765	2440968.233	102.744	Dist (128 - 129)	
129	83°45'43.75462"	22°02'57.50410"	785093.061	2440865.682	59.698	Dist (129 - 130)	
130	83°45'43.16718"	22°02'55.64334"	785077.246	2440808.117	10.720	Dist (130 - 131)	
131	83°45'42.82435"	22°02'55.50481"	785067.489	2440803.676	17.480	Dist (131 - 132)	
132	83°45'42.89483"	22°02'54.94069"	785069.825	2440786.353	30.624	Dist (132 - 133)	
133	83°45'42.16510"	22°02'54.21453"	785049.296	2440763.629	20.631	Dist (133 - 134)	
134	83°45'41.45043"	22°02'54.14051"	785028.836	2440760.980	12.711	Dist (134 - 135)	
135	83°45'41.18897"	22°02'53.80712"	785021.521	2440750.585	179.926	Dist (135 - 121)	

PNT_ID	LONGITUDE	LATITUDE	EASTING	NORTHING	Distance (Mtr.)	Reference	Remarks
136	83°45'40.75860"	22°03'03.45375"	785003.800	2441047.209	27.545	Dist (136 - 137)	Patch - G
137	83°45'41.49114"	22°03'02.87522"	785025.136	2441029.787	27.027	Dist (137 - 138)	
138	83°45'41.44470"	22°03'01.99815"	785024.293	2441002.773	21.512	Dist (138 - 139)	
139	83°45'40.87723"	22°03'01.54129"	785008.269	2440988.420	58.959	Dist (139 - 136)	

  
 Divisional Forest Officer  
 Sundargarh Division

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

Office of The General Manager  
Basundhara Area  
AT/PO-Basundhara-750078  
Dist-Sundargarh (Orissa)

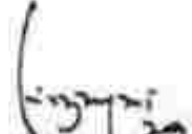


Annexure-XVIII ✓

**UNDERTAKING FOR FOREST LAND PROPOSED FOR DIVERSION SHALL NOT BE  
USED FOR ANY OTHER PURPOSE.**

(Condition No. (xvii))

We do hereby undertake that the specified forest land proposed for diversion shall not be used for any other purpose other than those shown in the diversion proposal and in no circumstance it will be transferred to any other agency, department or person without prior approval of the Central Government.

  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundargarh Division

Annex - XIX

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

Office of The General Manager  
Basundhara Area  
AT/PO:-Basundhara-750078  
Dist:-Sundargarh (Orissa)



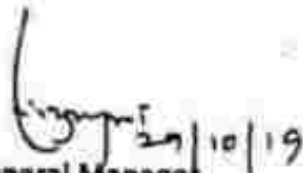
**MCL**

Annexure-XIX

**UNDERTAKING FOR NO DAMAGE TO FLORA AND FAUNA**

[Condition No. (xvii)]

We do hereby undertake that no damage to the flora and fauna of the adjoining area shall be caused for any activities.

  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundargarh Division

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

Office of The General Manager  
 Basundhara Area  
 ATPO-Basundhara-750078  
 Dist-Sundargarh (Orissa)




Annexure-XX

**UNDERTAKING TO EXPLORE POSSIBILITY OF TRANSLOCATION OF TREES**

(Condition No.(xix))

We do hereby undertake to explore the possibility of translocation of maximum number of trees identified to be felled and it is also agreed that any tree felling shall be done only when it is unavoidable and that too under the strict supervision of the State Forest Department.

  
 General Manager  
 Basundhara Area  
 General Manager  
 MCL, Basundhara Area

  
 Divisional Forest Officer  
 Sundargarh Division

ମହାନଦୀ କୋଇଲିମାନଙ୍କ ସମ୍ପର୍କରେ  
ମହାନଦୀ କୋଇଲିମାନଙ୍କ ସୀମିଟି  
Mahanadi Coalfields Limited  
(A subsidiary of Coal India Limited)

Office of The General Manager  
Basundhara Area  
ATPO-Basundhara-770078  
Dist-Sundergarh (Orissa)




**MCL**

Annexure-XXI

**UNDERTAKING TO SUBMIT ANNUAL SELF COMPLIANCE REPORT**

(Condition No. (xx))

We hereby undertake to submit Annual Self Compliance Report in respect of the conditions to the State Government, concerned Regional Office and to the of Ministry of Environment, Forest and Climate Change by the end of March every year regularly.

  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundergarh Division

ମହାନଦୀ କୋଇଲୀଭଣ୍ଡାର ଲିମିଟେଡ୍  
महानदी कोयलाखाना लिमिटेड  
Mahanadi Coalfields Limited  
(A subsidiary of Coal India Limited)

Office of The General Manager  
Basundhara Area  
AT/PO-Basundhara-770078  
Dist-Sundergarh (Orissa)



Annexure-XXII

**UNDERTAKING TO ABIDE ANY OTHER CONDITION**

(Condition No. (xxi))

We hereby undertake to abide any other condition stipulated by the Concerned Regional Office of this Ministry in the interest of conservation, protection and development of forests & wildlife.

*[Signature]*  
27/10/19  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

*[Signature]*  
Divisional Forest Officer  
Sundergarh Division

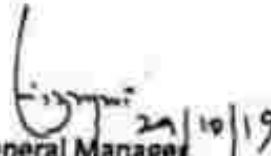


Annexure-XXIII

**UNDERTAKING TO COMPLY ALL THE PROVISION OF THE ALL ACTS, RULES,  
REGULATIONS, GUIDELINES, HON'BLE COURT ORDER(S) & NGT ORDER(S).**

(Condition No. (xxii))

We hereby undertake to comply all the provision of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order(s) and NGT Order(s) pertaining to this project, if any, for the time being in force, as applicable to the project.

  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundargarh Division

DISTRICT OFFICE, SUNDARGARH  
(REVENUE SECTION)  
No. 1738 DT. 14/9/2016

219

LF  
15.9.16  
21/9/16

To  
The Divisional Forest Officer,  
Sundargarh Division,

Sub: Diversion of 29.41 ha. of entire forest land including reserved forest in village Balinga, Bankibahal and Kuisira for non forest use for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd under Hemgir Tahsil.

Sir,

With reference to the subject cited above, I am to furnish herewith the certificate regarding compliance of Scheduled Tribes and other traditional forest dwellers (Recognition of Forest Rights) Act 2006 in respect of diversion of forest land measuring 29.41 ha. of entire forest land including reserved forest in village Balinga, Bankibahal and Kuisira for non forest use for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd. under Hemgir Tahsil. along with the copy of Pali Sabha Meeting resolution of village Balinga, Bankibahal and Kuisira for taking further necessary action at your end.

Yours faithfully,

[Signature]  
14/9/2016  
Addl. District Magistrate,  
Sundargarh.

3133  
22.9.16

Memo No. 1739 Dt. 14/09/2016


Copy forwarded to Special Secretary to Govt. Forest & Environment Deptt., Govt. of Odisha, Bhubaneswar / Addl. Principal Chief Conservator of Forest, Forest Diversion & Nodal officer, FC Act, Bhubaneswar / General Manager, Basundhara & Simal Area of MCL, Basundhara information and necessary action.

[Signature]  
14/9/2016  
Addl. District Magistrate,  
Sundargarh.

### CERTIFICATE

REGARDING COMPLIANCE OF SCHEDULED TRIBES & OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHT) ACT, 2006 IN RESPECT OF DIVERSION OF REVENUE FOREST LAND MEASURING 24.68 HA. IN VILLAGE BANKIBAHAL, 1.82 HA. IN VILLAGE BALINGA AND 1.53 HA IN VILLAGE KUISIRA AND RESERVE FOREST LAND MEASURING 1.37 HA IN VILLAGE KUISIRA FOR CONSTRUCTION OF BASUNDHARA COAL WASHERY OF MAHANADI COALFIELDS, LIMITED UNDER HEMGIR TAHSIL.


1. It is certified that the complete process for identification and settlement of rights under the Scheduled Tribes & Other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006 has been carried out for the entire Forest area including reserve forest area of 29.41 hectares proposed for diversion in village Bankibahal, Balinga and Kuisira for construction of Basundhara Coal Washery of Mahanadi Coalfields Ltd under Hemgir Tahsil. The concerned record of all consultations and meetings held are annexed in shape of Pali Sabha Resolution dt.29.4.2016 of village Bankibahal and Balinga and dated 8.7.2016 of village Kuisira and enquiry report of Tehsildar, Hemgir.
2. It is certified that the proposals for such diversion has been placed before the Pali Sabha of forest dwellers of village Baankibahal, Balinga and Kuisira under the Chairmanship of Smt. Padmini Majhi, Sarpanch of Balinga G.P and in presence of more than 50% of members of Pali Sabha and members of Village Forest Committee where the details of the projects and its implication have been explained to them in vernacular/ local language.
3. It is certified that discussions and decisions on such proposals had taken place only when there was quorum of minimum 50% of the members of the Pali Sabha present.
4. It is certified on the basis of the verification report and Pali Sabha Resolution dt. 29.4.2016 in village Bankibahal and Balinga and 8.7.2016 of village Kuisira that no such primitive Tribal groups and pre-agricultural communities were in occupation of the forest land proposed for diversion and whose forest rights are required to be specifically safeguarded as per section 3(1)(e) of the Forest Rights Act, 2006.
5. It is certified on the basis of the verification report and Pali Sabha Resolution dt. 29.4.2016 of village Bankibahal and Balinga and dated 8.7.2016 of village Kuisira that no such facilities managed by Government requiring diversion of Forest land U/s 3(2) of the Forest Rights Act, 2006 exist over the forest land proposed for diversion.

  
COLLECTOR, SUNDARGARH  
CHAIRMAN, D.L.C  
COLLECTOR  
SUNDARGARH

Annexure-I

LAND SCHEDULE


Sl. No.	Name of Village	Khata No.	Plot No.	Classification	Required Area		Already diverted as per statement of GM, MCL, BG Area	
					In Acre	In Ha.	In Acre	In Ha.
1	Bankibahal	57 (AJA)	370/p	Jungle	5.14	2.080	17.89	7.239
			395/p	Jungle	22.56	9.129	3.18	1.285
			398/p	Jungle	5.32	2.152	0	0
			402/p	Jungle	2.14	0.866	0	0
			412/p	Jungle	2.50	1.011	0	0
			414/p	Jungle	2.02	0.817	0	0
			444	Jungle	0.25	0.101	0	0
		<b>Total</b>	<b>7 Plots</b>	<b>39.93</b>	<b>16.156</b>	<b>21.07</b>	<b>8.52</b>	
2	Kuisira	64 (AJA)	216/p	Jungle	0.34	0.137	0	0
			475/p	Jungle	0.43	0.174	0	0
			479/p	Jungle	2.80	1.133	0	0
			481/p	Jungle	0.21	0.084	0	0
		<b>Total</b>	<b>4 plots</b>	<b>3.78</b>	<b>1.528</b>	<b>0</b>	<b>0</b>	
3	Balinge	121 (AJA)	1	Patra Jungle	2.94	1.189	0	0
			20/p	Patra Jungle	0.83	0.335	0	0
			21/p	Patra Jungle	0.08	0.032	0	0
			25/p	Patra Jungle	0.85	0.263	0	0
		<b>Total</b>	<b>4 plots</b>	<b>4.50</b>	<b>1.82</b>	<b>0</b>	<b>0</b>	
4	Kuisira			Reserve Forest	3.40	1.37	0	0
	<b>Grand Total</b>			<b>29.41 Hectares</b>	<b>51.61</b>	<b>20.89</b>	<b>21.07</b>	<b>8.52</b>

  
COLLECTOR, SUNDARGARH.  
CHAIRMAN, D.L.C.  
COLLECTOR  
SUNDARGARH

**Annexure-II**

List of Beneficiary to whom Title under FRA have been issued in village  
Kuisira

Sl. No.	Name of the Title Holder	Khata No.	Plot No.	Kisam	Area in Ha.
1	Matual Badek S/o- Kansu Badek	64 (AJA)	475/p	Jungle	0.174
			479/p	Jungle	1.133
			481/p	Jungle	0.084
		<b>Total</b>			<b>1.391</b>

  
COLLECTOR, SUNDARGARH  
CHAIRMAN, D.L.C.  
COLLECTOR  
SUNDARGARH



Annexure-XXV

**UNDERTAKING THAT OPERATION OF THE PROJECT SHALL BE SUBJECT TO  
PROPER R&R OF PROJECT AFFECTED FAMILIES AS PER APPROVED R&R POLICY.**

[Additional Condition No.(b) of Govt of Odisha, F&E Department]

We hereby undertake that operation of the project shall be subject to  
proper resettlement and rehabilitation of project affected families as per  
approved R&R policy.

  
29/10/19  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundargarh Division



**No. J-11015/435/2013-IA-II(M)**  
 Government of India  
 Ministry of Environment, Forest & Climate Change  
 Impact Assessment Division  
 \*\*\*

Indira Paryavaran Bhavan,  
 Vayu Wing, 3<sup>rd</sup> Floor, Allganj,  
 Jor Bagh Road, New Delhi-110 003

Dated: 31<sup>st</sup> October, 2019

To,

The Chief General Manager (CP&P)  
 M/s Mahanadi Coalfields Limited  
 PO - JagrutiVihar, Burla,  
**Sambalpur-768 020 (Odisha) E-mail: [cgmenvt2014@gmail.com](mailto:cgmenvt2014@gmail.com)**

**Sub: Basundhara Coal Washery of 10 MTPA in an area of 43.9 ha of M/s Mahanadi Coalfields Ltd., located in villages Balinga, Bankibahal & Kusharain, Tehsil Himgir District Sundergarh (Odisha) - Environmental Clearance - reg.**

Sir,

This has reference to your online proposal No. IA/OR/CMIN/20520/2013 dated 21<sup>st</sup> September, 2016 on the above mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for grant of environmental clearance to Coal Washery of 10 MTPA in an area of 43.9 ha of M/s Mahanadi Coalfields Ltd., located in villages Balinga, Bankibahal & Kusharain, Tehsil Himgir District Sundergarh (Odisha).

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its meetings held in the Ministry on 27<sup>th</sup> December, 2016, 27-28 February, 2017 and 13-14 December, 2018. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The proposal was accorded TOR vide letter No.J-11015/435/2013-IA.II(M) dated 30<sup>th</sup> September, 2014, followed by amendment in TOR on 29<sup>th</sup> February, 2016.
- (ii) The latitude and longitude of the project site are 22°01'02"N to 22°03'03" N and 83°43'28" E to 83°45'35" E respectively.
- (iii) Basundhara Washery will be located partly in the mine leasehold of Kulda OCP in Basundhara area of IB-Valley Coalfield in District Sundergarh (Odisha)
- (iv) Washery will be based on closed water circuit and Zero Effluent Discharge system. Rain water will also be utilised in the plant. In

case of emergency underflow from thickener shall be treated in 03 Nos. of slime ponds of size 75m x 20m x 3.5 m (each) and treated effluent shall be reused.

- (v) Total raw coal requirement of 10MTPA for the proposed washery will be met from Kulda OC Project of 10 MTPA of Basundhara area, for which EC was granted vide letter No. J/11015/10/95-IA.II(M) dated 24<sup>th</sup> December, 2002.
- (vi) The raw coal ash content of Kulda OCP is in the range of 43.8+4%). This ash content is proposed to be reduced to 33.5+ 0.5%) after washing in Basundhara Washery.
- (vii) Basundhara Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of ash content ranging between 39.8% to 47.8%) of KuldaOCP.
- (viii) Joint Venture: No joint venture.
- (ix) Coal Linkage :Linked to Kulda Opencast Project (10MTPA).
- (x) Employment generated / to be generated: Washery will be constructed on BOM concept, hence employment will be generated by BOM operator.
- (xi) Benefits of the project: The beneficiation/washing of coal will lead to improvement in performance of power plant, reduction in particulate emission, reduction in load on Railway Network and reduction in handling and transportation cost of coal and solid waste.
- (xii) Land usage of the total project area of 43.90 ha includes forest land of 29.41 ha, Government non-forest land 4.33 ha and tenancy land as 10.16 ha, with the acquisition details as under:-
  - Out of 29.41 ha of forest land, 8.52 ha has already been diverted for infrastructure of Kulda OCP vide FC No.8-176/1997-FC dated 8<sup>th</sup> August, 2007, which is proposed to be re-diverted for Basundhara Washery.
  - Stage-1 for diversion of 29.41 ha of forest land(20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanadi Coalfields Ltd.) in Sundargarh Forest Division of Sundargarh Division, Odisha for construction of Basundhara Coal Washery (10 MTPA) by M/s Mahanadi Coalfields Limited is granted by Ministry on 11<sup>th</sup> March, 2019.
  - Total 4.33 ha of Government non-forest land required for the washery and associated activities, 3.49 ha has already been acquired by the project proponent, and acquisition of the remaining 0.84 ha is in the process.

- Out of total 10.16 ha of tenancy land required for the washery and associated activities, 2.21 ha has been acquired by the project proponent and 1.13 ha has been acquired by Railway for Clean Coal Silo Area.

- (xiii) The coal grade is G12.
- (xiv) The total estimated water requirement is 2222 KLPD.
- (xv) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xvi) The life of Washery is 18 years for computation of economics.
- (xvii) Total make up water requirement of the washery is 145 m<sup>3</sup> /hr @ 0.085 m<sup>3</sup> /tonne of raw coal feed.
- (xviii) Green belt (15 m wide) in and around the washery site including around the conveyor, vacant places shall be developed to control dust emission.
- (xix) Dry Fog System shall be provided at all strategic coal transfer points, enclosures for conveyors etc.
- (xx) Existing Land use pattern

Sl. No	Description of structure	Total Land (ha)	Type of land (ha)		
			Forest	Govt	Tenancy
1	Washery	19.32	18.07	0.54	0.71
2	Reject Storage Site	2.71	--	1.53	1.18
3	Reject conveying corridor	0.85	0.53	0.32	--
4	Clean coal Conv. corridor	21.02	10.81	1.94	8.27
	<b>Total</b>	<b>43.90</b>	<b>29.41</b>	<b>4.33</b>	<b>10.16</b>

- (xxi) Transportation: By covered conveyor belts (for Raw coal, Washed coal & Reject).
- (xxii) There is no R & R involved. There are no PAFs.
- (xxiii) Total capital cost of the project is Rs. 334.72 crore.
- (xxiv) Basundhara River is at a distance of 0.5 km from the project site. Garland drain shall be constructed along the boundary of the washery on the river side to collect the surface runoff and treated runoff water

that shall be reused in the washing operation.

- (xxv) Mining plan was approved on 14<sup>th</sup> December, 2008. Mine closure plan is an integral part of mining plan.
- (xxvi) There are no court cases/violation pending with the project proponent.
- (xxvii) Public Hearing was held on 27<sup>th</sup> July, 2016 in Tehsil Hemgir, District Sundergarh (Odisha). During the public hearing, the issues related to environmental problems at project affected villages due to Basundhara Washery were raised.

4. The sectoral Expert Appraisal Committee, in its meeting held on 13-14 December, 2018, has recommended the project for grant of environmental clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords **Environmental Clearance to the Basundhara Washery of 10 MTPA capacity in an area of 43.90 ha. of M/s Mahanadi Coalfields Limited located in villages Balinga, Bankibahal & Kusharain, Tehsil Hemgir, District-Sundargarh (Odisha)**, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto and certain other conditions, in addition to the standard conditions for coal washery as specified at Annexure-XVII of this Ministry's OM No. 22-34/2018-IA.III dated 9<sup>th</sup> August, 2018, as under:-

- (i) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.
- (ii) Total fresh water requirement shall not exceed 2222 cum/day, proposed to be met from mine sump water of abandoned quarry of Basundhara (East) OC mine. No surface or ground water shall be used in coal washery operation.
- (iii) Study shall be carried for sustenance of water supply to cater to projected demand of the proposed washery from the abandoned mine(s) throughout planned life of the washery.
- (iv) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted.
- (v) Ash content below 34% should be maintained in washed coal to be transported beyond 500 km for use in thermal power plants.
- (vi) The washing technology so chosen should conform to 'Zero Liquid Discharge'.
- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.

- (viii) The project proponent shall reduce the time line for implementation of the action plan for carrying out incomplete/partially complete activities contained in mine closure of Basundhara (East) coal mine.
- (ix) For proper baseline air quality assessment, adequate monitoring stations in the downwind areas based on wind rose pattern of the area, shall be set up for collection of air quality data and air quality modeling.
- (x) Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.
- (xi) Thick green belt of adequate width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.

4.1 The grant of environmental clearance is further subject to compliance of generic conditions applicable for open cast mines and coal washery as under:

**(a) Statutory compliance:**

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (In case of the presence of schedule-I species in the study area.
- (iv) The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid waste/hazardous waste generated in the washery needs to be addressed in accordance to the Solid Waste Management Rules, 2016 / Hazardous & Other Waste Management Rules, 2016.

- (vii) Coal beneficiation practices shall be carried out under strict adherence to provisions of the Factories Act, 1957 and subordinate legislations made there under.

**(b) Air quality monitoring and preservation**

- (i) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely particulates, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc. carried out at least once in six months.
- (ii) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (iii) Transportation of coal by road shall be carried out by covered trucks/conveyors. The transportation of clean coal and rejects shall be by rail with wagon loading through silo. Effective measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulates such as roads, belt conveyors, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled at source. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (iv) All approach roads shall be black topped and internal roads shall be concreted. The roads shall be regularly cleaned. Coal transportation shall be carried out by covered trucks.
- (v) Covered trucks shall be engaged for mineral transportation outside the washery upto the railway siding, shall be optimally loaded to avoid spillage en-route. Trucks shall be adequately maintained and emissions shall be below notified limits.
- (vi) Facilities for parking of trucks carrying raw material from linked mine shall be created within the unit.

- (vii) Vehicular emissions shall be kept under control and regularly monitored. The vehicles having 'PUC' certificate from authorized pollution testing centres shall be deployed for washery operations.
- (viii) Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads.
- (ix) The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- (x) The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.

**(c) Water quality monitoring and preservation**

- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for compliance.
- (iii) Industrial waste water shall be properly collected and treated so as to conform to the standards prescribed under the Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time.
- (iv) The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the washery. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side stabilised with plantation so as to withstand the peak water pressure preventing any chance of inundation.
- (v) Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- (vi) The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are

to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run off from reject dumping sites.

- (vii) An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- (viii) Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- (ix) Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- (x) No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m<sup>3</sup>/tonne of raw coal.
- (xi) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- (xii) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (xiii) The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

**(d) Noise and Vibration monitoring and prevention**

- (i) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.



- (ii) Adequate measures shall be taken for control of noise levels as per noise pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

**(e) Coal beneficiation**

- (i) Coal stacking plan shall be prepared separately for raw coal, clean coal, middling and rejects.
- (ii) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

**(f) Green Belt**

- (i) Three tier greenbelt comprising of a mix of native species, of minimum 30 m width shall be developed all along the washery area to check fugitive dust emissions and to render aesthetic to neighbouring stakeholders. A 3-tier green belt comprising of a mix of native species or tree species with thick leaves shall be developed along vacant areas, storage yards, loading/transfer points and also along internal roads/main approach roads.
- (ii) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

**(g) Public hearing and Human health issues**

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & its RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.



wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/57/2014-IA.II (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

**(h) Corporate Environment Responsibility**

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- (ii) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- (iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (v) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

**(I) Miscellaneous**

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (vii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (viii) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (x) No change in coal beneficiation process and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC) with such conditions mentioned therein.

No change in the maximum quantum of raw material feed per annum against the approved washery capacity shall be made.

- (xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiii) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / Information/monitoring reports.
- (xv) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.

6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2<sup>nd</sup> August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

  
(Dr. R.B. Lal)

**Additional Director / Scientist E**

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. The Additional Principal Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar- 751023 (Odisha).
3. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar (Odisha).
4. The Member Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32.
5. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, River Development & Ganga Rejuvenation, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
6. The Member Secretary, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar - 751012 (Odisha).
7. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4<sup>th</sup> Floor, VikasMarg, Laxminagar, New Delhi.
8. The District Collector, Jharsuguda, Government of Odisha.
9. Monitoring File
10. Guard File
11. Record File
12. Parivesh Portal

  
(Dr. R.B. Lal)

**Additional Director / Scientist 'E'**



BY REGD POST/E-MAIL

OFFICE OF THE  
STATE POLLUTION CONTROL BOARD, ORISSA

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,

Bhubaneswar - 751 012

No. 8009 /

IND-II-NOC- 6001

Date 08.06.2017OFFICE MEMORANDUM

In consideration of the application no. 568165 received through online for obtaining Consent to Establish for Basundhara Coal Washery of M/s Mahanadi Coalfields Ltd., the State Pollution Control Board has been pleased to convey its Consent to Establish under section 25 of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 for manufacture / production of Washed Coal of capacity 7.456 MTPA and Coal Rejects of capacity 2.544 MTPA respectively by installation of washery of capacity 10 MTPA raw coal (throughput) inside the lease hold area of Kulda OCP of M/s MCL, At - Kulda OCP, MCL Basundhara Area (plot No. & Khata No. as mentioned in the application form) in the district of Sundargarh with the following conditions.

GENERAL CONDITIONS:

1. This consent to establish is valid for five years, which means the proponent shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this consent to establish shall be sought by the proponent.
2. Adequate effluent treatment facilities are to be provided such that the quality of sewage and trade effluent satisfies the standards as prescribed under Environment Protection Rule, 1986 or as prescribed by the Central Pollution Control Board and/or State Pollution Control Board or otherwise stipulated in the special conditions.
3. All emission from the industry as well as the ambient air quality and noise shall conform to the standards as laid down under Environment(Protection) Act, 1986 or as prescribed by Central Pollution Control Board/State Pollution Control Board or otherwise stipulated in the special conditions.
4. Appropriate method of disposal of solid waste is to be adopted to avoid environmental pollution.
5. The industry shall comply to the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous



and Other Wastes Management and Trans boundary Movement) Rules, 2016 as amended from time to time Hazardous Chemical Rules, (Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there under. The industry shall also comply to the provisions of Public Liability Insurance Act, 1991, if applicable.

6. The industry shall apply for grant of Consent to operate under section 25/26 of Water(Prevention & Control of Pollution)Act, 1974 & Air (Prevention & Control of Pollution)Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board.
7. This consent to establish is subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.

#### SPECIAL CONDITIONS :-

1. The proponent has to seek environmental clearance as per EIA notification 2006 and construction activity for the proposal shall commence after obtaining environmental clearance.
2. The proponent shall construct settling pond of adequate size to handle runoff to hold the runoff at least for 24 hours.
3. The proponent shall sign MoUs with different parties for disposal of rejects and submit copies of the same at the time of submission of consent to operate application.
4. The proponent shall submit a detail proposal for groundwater recharge at the time of submission of consent to operate application. Rain water harvesting shall be followed by utilizing the rain water collected from the roof of the administrative buildings for recharging of ground water within the premises as per the concept and practices prescribed by CPCB.
5. The coarse rejects and fine rejects shall be stored separately for further utilisation.
6. The proponent shall provide bag filter at double deck screen/roll crusher to control fugitive emission. The particulate matter emission in the stack attached to bag filter shall not exceed 100 mg/Nm<sup>3</sup>.
7. The proponent shall provide dry fog system at all strategic points such as coal stack yards, loading and unloading points, all transfer points, conveyors etc. to suppress dust fine atomizer nozzles a rangement shall be provided on the coal heaps and on land around the crusher/pulverizers as suggested in project report.
8. The proponent shall provide instant showers at the entrance of the haul road in order to prevent dust formation before its dumping into the receiving pit.



9. The proponent shall provide pneumatic jig with spinning dust remover and rotary reversal blowing bag type dust collector for dust extraction.
10. The proponent shall provide green belt along the boundary of plant, road side, coal handling plant, residential complex, office building etc.
11. The proponent shall provide pucca road either asphalted or concreted in and around the coal washery. Dust suppression arrangement shall be provided on haul road by using water sprinklers with suitable chemical dosing as suggested in project report.
12. The consumption of water in the coal washery shall not exceed 1.5 m<sup>3</sup>/tonnes of coal in any case.
13. The proponent shall conform to all the commitments made in the environment management plan incorporated in project report submitted along with consent to establish application.
14. The proponent shall provide gartland drains around the plant boundary and connected to the settling basin in order to prevent wash discharge directly going outside. The proponent shall provide internal drains inside the plant for collection of accumulated rain water which shall be recirculated and reused.
15. Under no circumstance the industry shall discharge wastewater to outside and the industry shall completely recycle the waste water.
16. Domestic wastewater shall be discharged to septic tank via soak pit constructed as per BIS specification.
17. The proponent shall cover the primary impact zone by rubber sheet of 70 mm thickness and the secondary impact zone by 40 mm thickness in order to prevent noise pollution at the coal transfer points.
18. The proponent shall provide polymer sheet of 25 mm thickness at sides of the crutes in all transfer points to control noise pollution.
19. The different in the value of SPM, delta (  $\delta$  ) measured between 25 and 30 meters from the enclosure of coal crushing plant in the downwards and leeward wind direction shall not exceed 150  $\mu\text{g}/\text{m}^3$  when measured by high volume sampler with flow rate not less than 1.1 m<sup>3</sup> / minute using upwind down wind method of measurement.
20. During rainy season or periodical cleaning of the systems, the effluent discharged to sewer / land / stream shall conform the following standards at the final outlet of the coal washing.  
pH = 5.5 - 9.0, TSS = 100 mg/l, Oil & grease = 10 mg/l, BOD = (3 days at 27°C) = 30 mg/l, COD = 250 mg/l, Phenolics = 1.0 mg/l
21. The solid waste such as coal rejects and thickener sludge generated from the unit shall be suitable disposed off separately within the premises or any other designated area as



- submitted in the solid waste management plan after due approval of the Board so as not to create any dust nuisance or ground water contamination.
22. The ambient air quality standards in respect of noise as notified under EP Rules, 1986 at the boundary line of the coal washing shall conform to the noise limit 75 dB(A) Leq. and 70 dB(A) Leq. During day and night respectively.
  23. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may be carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A statement indicating use of fly ash bricks during construction period shall be submitted to the Board quarterly for record.
  24. No production activity shall commence prior to installation of all pollution control measures. In case, it is found that the plant is operating without installation of appropriate pollution control equipment(s) and without permission for trial operation from the Board, a direction of closure shall be issued u/s 31-A of Air (PCP) Act, 1981 and / or u/s 33-A of Water (PCP) Act, 1974 without any further notice in this regard.
  25. The Board may impose further condition or modify the conditions as stipulated in this order during installation and / or at the time of obtaining consent to operate and may revoke this order in case the stipulated conditions are not implemented and / or information is found to have been suppressed / wrongly furnished in the application form.

*Handwritten signature*  
MEMBER SECRETARY

To,  
The Chief Manager,  
Basundhara Coal Washery of,  
M/s Mahanadi Coalfields Ltd.,  
Kulda OCP, Basundhara Area,  
Dist - Sundargarh, Odisha.

Memo No. 8010 /Dt. 08.06.2017

Copy forwarded to:

1. The Secretary Steels & Mines, Govt. of Odisha, Bhubaneswar
2. The District Magistrate & Collector, Sundargarh
3. The Director, Directorate of Mines, Govt. of Odisha, Bhubaneswar
4. The Regional Officer, SPC Board, Jharsuguda
5. The DFO, Sundargarh
6. Copy to HSM Cell, SPC Board, Bhubaneswar
7. Consent to operate section, SPC Board, Bhubaneswar.
8. Copy to Guard file

*Handwritten signature*  
SR. ENV. SCIENTIST, L-1 (N)



My Progress - My Progress Summary Dashboard - Only OCP Clearance - My Progress Summary Dashboard - July -  
 My Progress Summary Dashboard - Only OCP Clearance - My Progress Summary Dashboard - July -

Sl. No.	Project Name	Project Location	Project Status	Project Start Date	Project End Date	Project Progress (%)	Project Description	Project Details	Project Status	Project Start Date	Project End Date	Project Progress (%)	Project Description	Project Details
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...	...	...	...	...

*(Signature)*  
 Nodal Officer (Envt. & Forest)  
 Kolda OCP  
 Basundhara Area

भारतीय स्टेट बैंक  
State Bank Of India

MCHL-BALHISA  
MCL BASUNDHARA AREA  
PO BASUNDHARA, PIN-468001 770079  
Tel: 0661 262365 Fax: 0661 262365

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**NEFT / RTGS CHALLAN for CAMPA Funds**

Date : 11-07-2025

Agency Name.	MCL
Application No.	6716485403
MoEF/DO File No.	B-176/1997-FC VOL.
Location.	ORRISA
Address.	Jagruti Vihar Sambalpur
Amount(In Rs)	67555300/-

Amount in Words :Six Crore Seventy-Six Lakh Fifty-Five Thousand Three Hundred Rupees Only

**NEFT/RTGS to be made as per following details;**

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150825718485403 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCB Centre, 21/1, III Floor, Jalitta Towers, Mission Road, Bengaluru-560027

\* This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

**BANK COPY**

**यूनियन बैंक Union Bank of India**

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*Somnath Panat*

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*Somnath Panat*

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MCL, BANGALURU IATA AREA

SBPWR52025071592216435



## **Site Specific**

**Wildlife Conservation Plan for “Establishment of Basundhara Coal Washery of 10 MTPA by M/s Mahanadi Coalfields Limited at Village Balanga, Bankibahal and Kusharain under Hemgiri Tahasil of District Sundargarh under Sundargarh Forest Division, Odisha.**



**By**

**Divisional Forest Officer,**

**Sundargarh Division**

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## Executive Summary

- Coal India Limited (CIL) decided that all opencast mines with an annual capacity of 2.5 MTY or more, not linked to any pithead power house, should have provision for setting up coal washery with state-of-art technology.
- Proposed washeries are to be set up on Build, Operate & Maintain (BOM) concept.
- MCL has intended to install 4 nos. of washeries in Ib Valley & Talcher Coalfields.
- Accordingly, MCL awarded the job for preparation of CR (Conceptual Report) for setting up of Basundhara Washery at IB Valley Coalfield on Build, Operate & Maintain basis to M/s Central Mine Planning & Design Institute Ltd. (CMPDI).
- The proposed Basundhara coal washery will be located in the lease hold area of Kulda OCP of Basundhara area of MCL and its capacity shall be 10.0 MTY.
- The proposed project will receive coal from of Kulda OCP of Basundhara Area, MCL.
- The washing of coal will lead to improvement in performance of power plant, reduction in particulate emission, reduction in load on Railway Network and reduction in handling and transportation cost of coal and solid waste.
- The total land requirement is 43.9 ha (Forest land- 29.41 ha, Govt. Non Forest Land-4.33 ha; Private land 10.16 ha).
- The MoEF&CC, Govt. of India (Impact Assessment Division) has issued the Environment clearance vide No.J-11015/435/2013-IA-II (M) dated 31.10.2019,
- Forest diversion proposal was filed vide Proposal No FP/OR/IND/16495/2015 dated 17.11.2015. After consideration the MoEF & CC (FC Division) has issued an EDS where in submission of Site Specific Wildlife Conservation Plan and the funds to be deposited in CAMPA Account prior to Stage-II orders vide File No.8-176/ 1997 FC (Vol) dated 12<sup>th</sup> December, 2019.
- This plan is being prepared for compliance of both EC and FC conditions.
- The proposed washery project is located within Kulda OCP in Basundhara Area of Ib valley Coalfield of Mahanadi Coalfields Limited in the Sundergarh District of Odisha.
- The project comes within the village limit of Balinga, Bankibahal and Kushara under Hemgiri Tahasil of District Sundargarh under Sundargarh Forest Division, Odisha.
- The project is bounded by Latitudes 22° 01' 02" & 22° 03' 03" N and Longitudes of 83° 43' 28" & 83° 45' 35"E.
- The project finds place in Survey of India Topo map F44L16 (64N/16).

- The total forest land involved in the project is 29.41 ha out of which 28.04ha revenue forest and 1.370 ha is Reserved Forests (Pandripani RF).
- Sundergarh is the nearest town located at a distance of 48 km from the Kulda OCP. The Sundergarh-Raigarh road passes through this Block.
- The nearest rail-head is Hemgir Railway station. The distance of the station is about 38 km from the block.
- A coal corridor is under construction from Bankibahal – Bhedabahal. Another coal corridor from Duduka to Kanika Rail siding has already been constructed for evacuation of coal from mines of Basundhara Area of Mahanadi Coalfield Limited.
- Jharsuguda- Gopalpur Rail corridor has already constructed and in use. The 2<sup>nd</sup> line is also under construction for facilitating quick coal evacuation.
- The project cost has been projected at Rs 33472 Lakh (Rs 334.72 crore).
- The project is Non Linear.
- The land involved is 43.90 ha out of which 29.41ha is forest land, 4.33 ha - Govt. Non Forest Land and 10.16ha is Private land. Out of 29.41ha forest land proposed for diversion; 20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanandi.
- The user agency has applied for diversion of 29.41ha forest land(20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanandi Coalfields Ltd.) vide Proposal No FP/OR/IND/16495/2015 dated 17.11.2015.
- The MoEF&CC, New Delhi has issued the "In Principle approval orders vide File No. 8-176/1997-FC (Vol.) dated 11<sup>th</sup> March, 2019
- The area for the Project i.e. Establishment of Basundhara Coal Washery is not forming a part of Wildlife sanctuary nor any protected area nor its Eco sensitive area. No Wildlife Clearance U/s 29 of the Wildlife (Protection) Act, 1972 is required.
- Establishment of Basundhara Coal Washery for 10MTPA has obtained Environment Clearance vide Letter No.J-11015/435/2013-IA-II (M) dated 31.10.2019
- The Zone of Impact otherwise known as Study area / Buffer Zone is the area coming within 10 km radius from the project boundary. The zone of impact of the present project is computed to be 372.60 Sq.Km. The entire Zone of Impact comes in Sundergarh District / Division.
- The project area comes in 3 villages i.e. Bankibahal, Balinga and Khusara.

- There are 47 villages in Zone of impact. On analysis on 2011 Census data, it is observed that the total population is 48,117 in 12011 house hold.
- SC population is 6314 (13.12%); ST Population 26340 (54.74%) and literacy rate is 63.35%. The Male Female Ratio is 977 female per 1000 male.
- Occupational profile of Zone of Impact has been analyzed from 2011 Census data. It is observed that 49.07% of the population constitutes the Work Population and rest 50.93% are non-work population.
- Out of total work population 55.58% are main work population whereas rest 44.42% are marginal work population. The main workers are further classified to Cultivators, Agricultural labour, House hold Trade and other trade.
- The forests of this tract are mostly Moist Deciduous Sal Forest, Dry Deciduous Sal Forest, and Mixed forest with Dry Bamboo break.
- The Pandripani RF is coming within the Project area which is dry deciduous mixed forests with bamboo.
- There is no Floral Rare; Endangered & Threatened Species (RET) within Zone of Impact as per Botanical Survey of India. However on field observations many floral species are considered to be rare in the locality and its preservation/ conservation and propagation is of paramount importance.
- These are Bija, Pahadi Sisoo, Bandhan, Kuruma, Amla etc.
- The faunal species those are under Schedule-I are considered to be rare.
- The forests observed in this zone of impact can be broadly classified as **3C North Indian Moist Deciduous Forest and 5B Northern Tropical Dry Deciduous Forest** as per Champion and Seth classification of the forest types of India on basis of climate, moisture condition and eco-types.
- There are 18 Forest Blocks within the Zone of Impact.
- The project i.e. Basundhara Coal Washery is not forming a part of any Wildlife Sanctuary, National Park, Protected area. It is also not part of any Eco- Sensitive Zone of any Wildlife Sanctuary, National Park, and Protected Area.
- Due to dense forest of Garjanpahad, RF, Dhanubansha RF it is a good habitat for migratory elephant, Leopard, Tiger and Panther. Recently Panther and RBT has been observed in the forests of Hemgir, Gopalpur Range.
- Elephants are used to migrate from Chhattisgarh enters to Hemgir / Gopalpur forests and move towards Jharsuguda. Due to migration of elephant man- animal conflict is persisting throughout the year.

- Due to heavy mining in the ZOI, the animals keep away from this Zone of Impact.
- Due to biotic interference and degradation of forest only Indian hare, Jackal, Mongoose, Wild Pig, Barking Deer, etc are found. Occasionally one or two elephants pass through the area for crop raiding during paddy harvesting season.
- The DFO, Sundargarh has visited the area on 09.02.2016.
- Forty five percent of leopard population in Odisha is located outside the Protected Area network and thus the territorial Forest Divisions have considerable leopard presence. The rare melanistic leopard morph was recorded from three Forest Divisions.
- Sundargarh Division is one of the three division as mentioned above.
- There is no wildlife Corridor in the Division. However movement of elephant is very erratic around the Zone of Impact. Better presence of elephant is felt near to Garjan Pahad RF in Hemgir range. Movement in Gopalpur range now is not so remarkable but occasional presence causes panic among the staffs / public.
- Its capacity shall be 10.0 MTY.
- The proposed project will receive coal from of Kulda OCP of Basundhara Area, MCL. The raw coal ash content of Kulda OCP is in the range of  $43.8 \pm 4\%$ . This ash content is proposed to be reduced to  $33.5 \pm 0.5\%$  after washing in Basundhara Washery for use in thermal power stations.
- It is planned for two product namely clean coal and reject. Washed coal shall be transported from Basundhara washery to the silo (4000 t) near railway siding by 2x2000 TPH covered conveyor belts of length 1.85 Km.
- The reject from the washery shall be transported from washery to reject site (area 2.70 ha) by covered conveyor belt of length about 2.2 Km.
- The BOM operator will be responsible to produce washed power coal with the quality specification laid down by MCL.
- The washing of coal will lead to improvement in performance of power plant, reduction in particulate emission, reduction in load on Railway Network and reduction in handling and transportation cost of coal and solid waste.
- Considering about three years development period for getting approval from various statutory bodies and for construction & commissioning of washery, the coal will be available for about 30 years from Kulda OCP.

- Life of the washery has been taken as 18 years for computation of economics keeping in view the life of the major equipment to be installed for setting up of washery. However, the life of the washery shall be about 30 years.
- In process of Washing Run-of-Mine Coal (-) 100mm, transported by two nos. parallel belt conveyors installed by MCL shall be received at coal washery site and sent into a set of Receiving hoppers, 1 no. each of capacity 1000T for 4 independent streams.
- The Raw Coal shall be fed to a Dry Scalping Screen where the coal <50mm fraction shall be separated out.
- The coal in between 50mm to 100mm fraction shall be fed to a Double Roll Crusher and the crushed coal shall be re-circulated to the Dry Scalping Screen along with fresh feed raw coal using a set of conveyors.
- Motor Feeders provided beneath the Storage Bunker shall deliver Coal size <50mm to a set of Belt Conveyors at 425TPH capacity which shall be feed to four nos Heavy Media Cyclone based Coal Washery units.
- In each Coal Washery unit, the coal shall be first be fed to a Sizing Screens in order to separate out (-) 13 mm fraction. The (+) 13 (-) 50 mm) fraction shall be delivered into a Coal Wetting Launder where water shall be added to the Coal.
- The washed coal, from each Coal washery unit, shall be transported by a set of conveyors and stored in two Washed coal Sheds of 15000T cap each using Tripper conveyors.
- The stored washed coal shall be reclaimed by a set of vibrating feeders and transported by a set of belt conveyors to the washed coal Silos located at Railway siding.
- The rejects generated from each Coal Washery unit, shall be collected by reject Belt Conveyor and shall be transported to proposed temporary storage site through series of covered belt conveyors.
- The reject from the temporary storage site shall be disposed of.
- The Washery is based on zero discharge system. Make-up water of 145 m<sup>3</sup>/hr shall be met from Basundhara (E) quarry. Water required for potable use, sanitation, spray, sprinkling shall be pre-treated in a water treatment plant.
- The source of water for the washery shall be Basundhara (E) quarry which are approximately 3.5 km from washery site. The total estimated water requirement is 2222KLPD

- The raw coal throughput capacity of this washery considered is Annual: 10.0 MT / Daily: 30300 ton and Hourly: 2000 ton
- Total raw coal requirement of 10.0 MTY for the proposed washery will be met from Kulda OC Project.
- The source of power for operation of the plant will be Garjanbahal Sub-station (220KV /33KV). The power shall be made available at 33kv. The distance of the sub-station from the proposed washery shall be approx 4.0 km.
- The firefighting arrangement shall be provided at all strategic points as per BIS norms. The system shall also be complying with provisions of Factory rules for firefighting arrangement.
- Sprinkle System preferably Dry Fog System for dust suppression will be installed to keep environment clean.
- Green belt (15m wide) of area 4.6 Ha will be developed in and around the washery site. Avenue plantation shall also be done along the roads.
- Drains shall be provided for proper drainage arrangement of storm water as well as incidental water from the various buildings / sections and also from the entire site.
- Total Washery reject will be around 2.50 MTPA. This rejects will be disposed of by auction sale. MCL will ensure mode of loading of rejects by mechanical means into the railway wagons for lifting of rejects.
- Fugitive dust may be generated during transfer of ROM (Run of Mines) from Kulda OCP coal stock yard to Washery, internal movement of Coal including Screening, crushing and transfer of reject to reject stock yard.
- During the construction phase of the washery, the source of noise pollution is expected from machineries used for construction, installation and commissioning of the equipment.
- During operational phase, noise pollution is expected from operation of the machineries involved in the main process of the plant and DG sets,
- Due to noise generated during transportation of materials.
- Deposit of coal dust, road dust on soil may make the soil more compact, impervious to water percolation, soil more acidic, and soil texture change. Due to this changes, the nutrient availability to plants may be reduced substantially affecting the growth pattern, plant community etc.

- For establishment of Coal washery, during filing of application under *Van (Sanrakshan Evam Samvardhan) Adhiniyam*, 1980 tree enumeration on forest and Non forest has been enumerated. The total number of trees to be removed is projected at 958 numbers (On Revenue Forest land: 575 No; On Reserved Forest: 174 No, on Non- Forest land: 209 numbers).
- The project requires Resettlement & Rehabilitation of 83 families.
- The washery will operate throughout the day and night over the years. It will operate in three shifts of 8 hours each.
- Reduced investment costs
- Reduced operation and maintenance (O&M) costs due to less wear and reduced costs for fuel and ash handling
- Energy conservation in the transportation sector and lower transportation costs
- Less impurities and improved coal quality
- Reduced load on the air pollution control system; and
- Reduction in the amount of solid waste that has to be disposed of;
- The Coal washery functions on value addition principles leading to better environment quality at Thermal Power Plants.
- The adverse factors for the washery are Impact due to dusts / fugitive dusts released to air at various points in the process of washing,
- Noise due to running machinerles, Conveyor belt functioning and vehides;
- Use of huge quantum of water i.e. Make-up water of 145 m<sup>3</sup>/hr. The total estimated water requirement is 2222KLPD
- There will be impact on Water bodies, on Soil Environment, on Wildlife, and Socio-Economic Impact;
- The Impact on Wildlife are
- Due to increase RSPM animals may be affected by Respiratory diseases,
- Noise may affect their communication system which is mostly by their usual sound;
- Matting calls may be remain unheard resulting mental pressure and subsequent loss of libido,
- Nocturnal birds may find difficult in navigation and may be resulted in hitting with transmission lines, other obstacles and may meet death;
- Strong illumination in washery premises may affect movement of reptiles / snakes / animals of deer and Cat family;
- Loss of natural habitat, wetland loss may reduce living territory;

- Removal of trees may reduce the shelter place for animals/ birds etc,
- The Basundhara nala / River which is being considered as an animal corridor connecting habitat from North West to South East may be seriously affected;
- Reduction of water flow may result scarcity of water in the lower end of the Basundhara nala, - Animal may face scarcity of water – left them thirsty during summer,
- The washery is depending on Kulda Extension OCP for entire requirement of Raw Coal (10MTY).
- The project authority (M/s MCL) is implementing a site specific wildlife Conservation Plan for Kulda Extension OCP. The WLCP has been approved vide letter No 8180 / CWLW-FDWC-FD-0033-2024 dated 19.07.2024 letter No 8180 / CWLW-FDWC-FD-0033-2024 dated 19.07.2024
- The total cost to be deposited in ODISHA CAMPA Fund is Rs 1115.120 Lakh for various interventions to be implemented by the Forest Department.
- For the present project, the user agency will implement the following interventions
- The User agency will Maintaining Green Belt, Green belt along Roads etc- Probable location of Dust Generation,
- Dust Suppression, Managing Site Illumination;
- Taking up Institutional Plantation, Conservation of Avifauna, Construction of Temporary Check dams ( By sand bag);
- To take up Storm Water management in Project area,
- Renovation of Village Ponds, Reducing Surface water Turbidity by adding Coagulants;
- Maintain Height of Conveyor belt i.e. Ground Clearance above 6m and Height of High level Bridge above 6m from ground level;
- To deposit 5% of the project cost in accounts of "the Wildlife Society, Odisha" i.e. Rs 33.83 Lakh;
- This plan is valid for 5 years i.e. from 2025-26 to 2029-30.
- The Plan cost is projected at Rs 676.553 Lakh (Rupees Six Crore Seventy Six Lakh Fifty Five Thousand & Three Hundred Only.)



## CHAPTER-01 LOCATION OF PROJECT & ITS AREA



## CHAPTER-01

### Location of Project & Its Area;

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#### 1.0 Introduction:

A review meeting was taken by Honorable Minister of State (Coal) in January 2007 at CIL (HQ), Kolkata. In the review meeting, Coal India Limited (CIL) decided that all opencast mines with an annual capacity of 2.5 MTY or more, not linked to any pithead power house, should have provision for setting up coal washery with state-of-art technology. These proposed washeries are to be set up on Build, Operate & Maintain (BOM) concept. Keeping in view the above decision, MCL has intended to install 4 nos. of washeries in Ib Valley & Talcher Coalfields. Accordingly, MCL awarded the job for preparation of CR (Conceptual Report) for setting up of Basundhara Washery at IB Valley Coalfield on Build, Operate & Maintain basis to M/s Central Mine Planning & Design Institute Ltd. (CMPDI) vide letter no. MCL/HQRS/ GM (CP&P)/10/3408 dtd 09.06.2010. Thereafter, in the review meeting with Director (T), CIL held on 08.08.2008 at Kolkata it was discussed and agreed by all concerned present in the meeting that to expedite the works for setting up of coal washeries. The proposed Basundhara coal washery will be located in the lease hold area of Kulda OCP of Basundhara area of MCL and its capacity shall be 10.0 MTY. The proposed project will receive coal from of Kulda OCP of Basundhara Area, MCL. The raw coal ash content of Kulda OCP is in the range of  $43.8 \pm 4\%$ . This ash content is proposed to be reduced to  $33.5 \pm 0.5\%$  after washing in Basundhara Washery for use in thermal power stations.

The washing of coal will lead to improvement in performance of power plant, reduction in particulate emission, reduction in load on Railway Network and reduction in handling and transportation cost of coal and solid waste.

The total land requirement is 43.9 ha (Forest land- 29.41 ha, Govt. Non Forest Land-4.33 ha; Private land 10.16 ha). The MCL authority has applied for Environment Clearance for 10.00MTPA capacity vide online proposal No IA/OR/CMIN/20520/2013 dated 21.09.2016. The MoEF&CC, Govt. of India (Impact Assessment Division) has issued the Environment clearance vide No.J-11015/435/2013-IA-II (M) dated 31.10.2019 (Annexure-I). In the Environment Clearance Order stipulated condition No 4.1 (a)(iii) reads as follows.

***(iii) The project proponent shall prepare a Site- Specific Conservation Plan / wildlife Management Plan and approved by the Chief wildlife Warden. The recommendations of the approved Site- Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six- monthly compliance report (in case of the presence of Schedule-I Species in the study area."***

Further Forest diversion proposal was filed vide Proposal No FP/OR/IND/16495/2015 dated 17.11.2015. After consideration the MoEF & CC (FC Division) has issued an EDS where in submission of Site Specific Wildlife Conservation Plan and the funds to be deposited in CAMPA Account prior to Stage-II orders vide File No.8-176/ 1997 FC (Vol) dated 12<sup>th</sup> December, 2019. (Annexure-II). The State Govt. while forwarding the Stage-I orders has stipulated additional condition vide letter No 10F (Con) 91/2016 6414/ F&E dated 29.03.2019 is at Annexure-II (A). The point no (d) reads as follows.

***"d) User Agency shall prepare the Site- Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha to be approved by PCCF (WL) & CWLW, Odisha for its execution at project cost."***

Hence this plan is being prepared accordingly.

### **1.1 Location of the Project:**

The proposed washery project is located within Kulda OCP in Basundhara Area of Ib valley Coalfield of Mahanadi Coalfields Limited in the Sundergarh District of Odisha. The project comes within the village limit of Balinga, Bankibahal and Kushara under Hemgiri Tahasil of District Sundargarh under Sundargarh Forest Division, Odisha. The project is bounded by Latitudes 22° 01' 02" & 22° 03' 03" N and Longitudes of 83° 43' 28" & 83° 45' 35"E. The project finds place in Survey of India Topo map F44L16 (64N/16). The location map is at Plate-I

#### **1.1.1 Forest Administrative Jurisdiction:**

Sl No	Forest Jurisdiction		Civil Jurisdiction	
1	Beat	Tikillpara	Village	Balinga, Bankibahal and Khshara
2	Section	Gopalpur	Tahasil	Hemgir
3	Range	Gopalpur	Sub Division	Sundargarh
4	Division	Sundargarh	District	Sundargarh
5	Circle	Rourkela	Division	Sambalpur

### 1.1.2 Extent of Project Area & Land Schedule:

The total area is 43.90ha. The village wise details of land is furnished below.

Sl No	Village	Forest land (in Ha)	Non Forest land (in ha)	Total (in Ha)
1	Bankibahal	24.690	2.670	27.360
2	Balinga	1.820	3.030	4.850
3	Khusara	1.530	8.790	10.320
4	Reserved Forest (Pandripani RF)	1.370	0.000	1.370
	<b>Total</b>	<b>29.410</b>	<b>14.490</b>	<b>43.900</b>
	<b>Percentage</b>	<b>67.0</b>	<b>33.0</b>	<b>100.0</b>

### 1.1.3 Forest Land Break Up:

The total forest land involved in the project is 29.41 ha out of which 28.04ha revenue forest and 1.370 ha is Reserved Forests (Pandripani RF).

### 1.1.4 Approach to the Project:

Sundergarh is the nearest town located at a distance of 48 km from the Kulda OCP. The Sundergarh-Raigarh road passes through this Block. The nearest rail-head is Hemgir Railway station. The distance of the station is about 38 km from the block. A coal corridor is under construction from Bankibahal – Bhedabahal. Another coal corridor from Duduka to Kanika Rail siding has already been constructed for evacuation of coal from mines of Basundhara Area of Mahanadi Coalfield Limited. Jharsuguda- Gopalpur Rail corridor has already constructed and in use. The 2<sup>nd</sup> line is also under construction for facilitating quick coal evacuation.

### 1.2 Cost of the Project:

The project cost has been projected at Rs 33472 Lakh (Rs 334.72 crore). This has been indicated in the forest diversion as well as Environment Clearance orders. The Form A (Part-I) of the online diversion proposal is at Annexure-III

### 1.3 Nature & Land involved in the Project:

The project is Non Linear. The land involved is 43.90 ha out of which 29.41ha is forest land, 4.33 ha - Govt. Non Forest Land and 10.16ha is Private land. Out of 29.41ha forest land proposed for diversion; 20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanadi Coalfields Ltd. Area from Pandripani RF to an extend of 1.370ha is involved in the project.

#### **1.4 Stipulated Condition under which plan to be prepared:**

The project requires forest diversion under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Environment Clearance as per EIA notification 2006 under Environment (Protection) Act, 1986. The Wildlife Conservation / management Plan is required to be prepared under both the provisions i.e. under Forest clearance and Environment Clearance conditions. The stipulated conditions reads as follows.

##### **a) Under Environment Clearance Condition:**

Stipulated condition No 4.1 (a)(iii) reads as follows.

*(iii) The project proponent shall prepare a Site- Specific Conservation Plan / wildlife Management Plan and approved by the Chief wildlife Warden. The recommendations of the approved Site- Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six- monthly compliance report (in case of the presence of Schedule-I Species in the study area.) (Annexure-I)*

##### **b) Under Forest Clearance:**

The additional condition stipulated by the State Government vide letter No 10F (Con) 91/2016 6414/ F&E dated 29.03.2019 of Forest & Environment Department, Govt. of Odisha the point no (d) reads as follows.

*"d) User Agency shall prepare the Site- Specific Wildlife Conservation Plan as per guidelines of CWLW, Odisha to be approved by PCCF (WL) & CWLW, Odisha for its execution at project cost." [Annexure-II (A)]*

Hence this Plan is prepared to comply conditions under both the provisions.

#### **1.5 Statutory Clearance:**

##### **1.5.1 Status of Forest Clearance:**

The user agency has applied for diversion of 29.41ha forest land(20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanandi Coalfields Ltd.) vide Proposal No FP/OR/IND/16495/2015 dated 17.11.2015. The MoEF&CC, New Delhi has issued the "In Principle approval orders vide File No. 8-176/1997-FC (Vol.) dated 11<sup>th</sup> March, 2019 (Annexure-IV)

### **1.5.2 Status of Wildlife Clearance:**

The area for the Project i.e. Establishment of Basundhara Coal Washery is not forming a part of Wildlife sanctuary nor any protected area nor its Eco sensitive area. No Wildlife Clearance U/s 29 of the Wildlife (Protection) Act, 1972 is required.

### **1.5.3 Status of Environmental Clearance:**

The proposed Project i.e. Establishment of Basundhara Coal Washery for 10MTPA has obtained Environment Clearance vide Letter No.J-11015/435/2013-IA-II (M) dated 31.10.2019 (Annexure-I).



## CHAPTER-02

### PROJECT & ITS IMPACT AREA



## **CHAPTER-02**

### **Project & Its Impact Area**

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#### **2.0 Description of Project Area & Its Impact Area:**

For establishment of Coal washery (10MTY) at Basundhara Area, land requirement has been projected at 43.90 ha out of which 29.41ha is forest land, 4.33 ha - Govt. Non Forest Land and 10.16ha is Private land. Out of 29.41ha forest land proposed for diversion; 20.89 ha fresh forest land and 8.52 ha of forest land for re-diversion out of already diverted forest area of 227.89 ha for Kulda OCP of Mahanandi Coalfields Ltd. Area from Pandripani RF to an extend of 1.370ha is also involved in the project.

#### **2.1 Location of the Project:**

The proposed washery project is located within Kulda OCP in Basundhara Area of Ib valley Coalfield of Mahanadi Coalfields Limited in the Sundergarh District of Odisha. The project comes within the village limit of Balinga, Bankibahal and Kushara under Hemgiri Tahasil of District Sundergarh under Sundergarh Forest Division, Odisha. The project is bounded by Latitudes 22° 01' 02" & 22° 03' 03" N and Longitudes of 83° 43' 28" & 83° 45' 35" E. The project finds place in Survey of India Topo map F44L16 (64N/16). The location map is at Plate-I

#### **2.1.1 Approach to the Project:**

Sundergarh, the district headquarters is the nearest town located at a distance of 48 km from the Kulda OCP. The Sundergarh-Raigarh road passes through this block. The nearest rail-head is Hemgir Railway station. The distance of the station is about 38 km from the block. A coal corridor is under construction from Bankibahal – Bhedabahal. Another coal corridor from Duduka to Kanika Rail siding has already been constructed for evacuation of coal from mines of Basundhara Area of Mahanadi Coalfield Limited. Jharsuguda-Gopalpur Rail corridor has already constructed and in use. The 2<sup>nd</sup> line is also under construction for facilitating quick coal evacuation. The nearest airport is Vira Surendra Sai airport, Jharsuguda which is about 60km from the project location. The project is well connected by Road and rail line.

## 2.2 Zone of Impact:

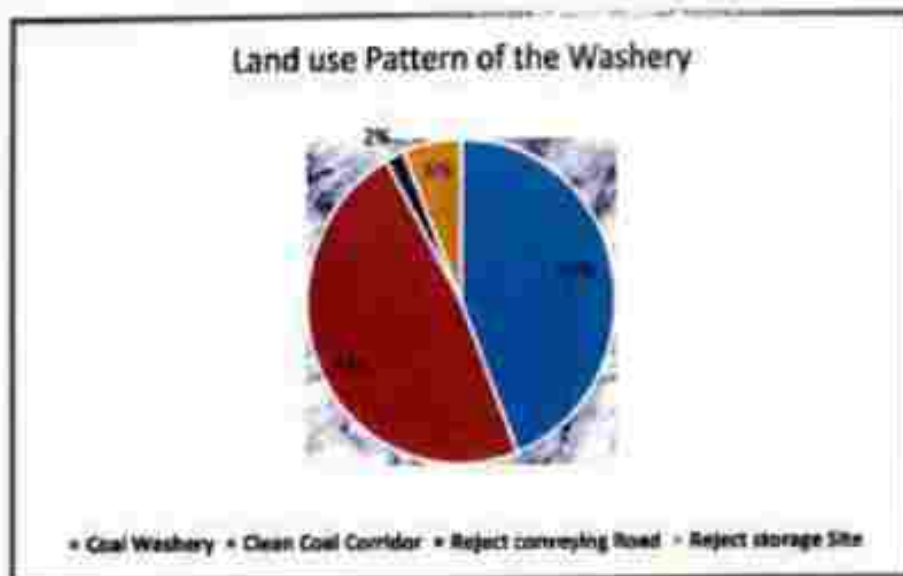
The Zone of Impact otherwise known as Study area / Buffer Zone is the area coming within 10 km radius from the project boundary. The zone of impact of the present project is computed to be 372.60 Sq.Km. The entire Zone of Impact comes in Sundargarh District / Division.

## 2.3 Land Use Pattern

### 2.3.1 Land use Pattern (Core Zone) .

The land use pattern as indicated in Forest Diversion Proposal and EIA Report is furnished below.

Sl No	Component	Forest land	Non Forest Land	Total	Percentage
1	Coal Washery	18.07	1.25	19.32	44.0
2	Clean Coal Corridor	10.81	10.21	21.02	47.9
3	Reject conveying Road	0.53	0.32	0.85	1.9
4	Reject storage Site	0	2.71	2.71	6.2
	Total	29.41	14.49	43.90	100

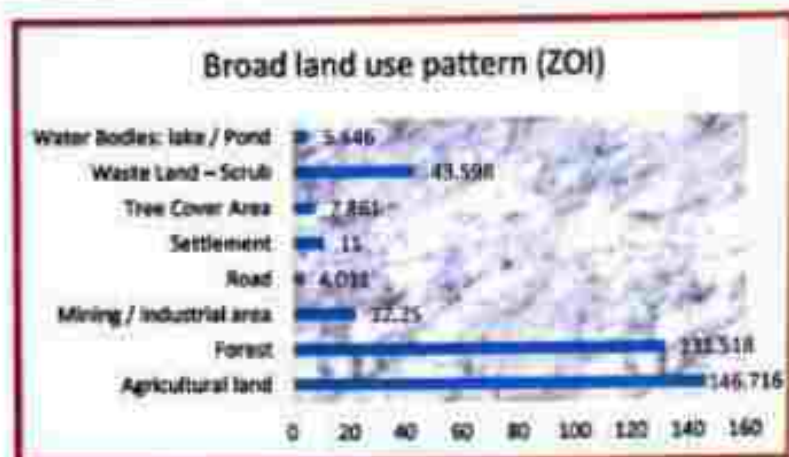


### 2.3.2 Land use Pattern (ZOI):

Sl No	Land use	Area in Sq. Km	Percentage
1	Agricultural land	146.716	39.38
2	Dense forest	58.217	15.62
3	Mining / Industrial area	22.250	5.97
4	Open Forest	47.349	12.71
5	Reservoir	0.470	0.13
6	Road	4.011	1.08
7	Scrub Forest	25.952	6.97
8	Settlement	11.000	2.95
9	Tree Cover Area	7.861	2.11
10	Waste Land – Scrub- Dense	16.224	4.35
11	Waste Land – Scrub- Open	27.374	7.35
12	Water Bodies: lake / Pond	1.923	0.52
13	Water Bodies: River / Canal / Drain	3.253	0.87
	<b>Total</b>	<b>372.60</b>	<b>100.00</b>

### 2.3.3 Broad Land Use Pattern:

Sl No	Land use	Area in Sq. Km	Percentage
1	Agricultural land	146.716	39.38
2	Forest	131.518	35.3
3	Mining / Industrial area	22.250	5.97
4	Road	4.011	1.08
5	Settlement	11.000	2.95
6	Tree Cover Area	7.861	2.11
7	Waste Land – Scrub	43.598	11.7
8	Water Bodies: lake / Pond	5.646	1.52
	<b>Total</b>	<b>372.60</b>	<b>100.00</b>



## 2.4 Habitation:

### 2.4.1 Core Zone:

The project area comes in 3 villages i.e. Bankibahal, Balinga and Khusara. The demographic profile of these three villages is furnished below.

Sl.No.	Name	No_HH	TOT_P	TOT_M	TOT_F	P_SC	P_ST	P_LIT
1	Bailanga	286	1028	541	487	279	328	728
2	Bankibahal	200	750	384	366	31	489	428
3	Kushara	143	568	277	291	30	389	391
	Total	629	2346	1202	1144	340	1206	1547
	Percentage			51.24	48.76	14.49	51.41	65.94

The core village is a tribal village (51% of population). The literacy rate is 65.94%. Male Female Ration is 952 female per 1000 male.

### 2.4.2 Habitation – Zone of Impact:

The zone of Impact is completely within Sundargarh Division / District. There are 47 villages in Zone of impact. The abstract of demographic profile as per 2011 Census is furnished below.

Abstract of Demographic Profile (Zone of Impact)									
Sl.no	District	Village No	No_HH	TOT_P	TOT_M	TOT_F	P_SC	P_ST	P_LIT
1	Sundargarh	47	12011	48117	24338	23779	6314	26340	30484
	Percentage				50.58	49.41	13.12	54.74	63.35

On analysis, it is observed that the total population is 48,117 in 12011 house hold. It indicates that each house hold is having 4 person. This indicates a nucleus family. SC population is 6314 (13.12%); ST Population 26340 (54.74%) and literacy rate is 63.35% . The Male Female Ratio is 977 female per 1000 male.

### 2.4.3 Occupational Profile (Zone of Impact):

Occupational profile of Zone of Impact has been analyzed from 2011 Census data. The abstract of occupational profile is furnished below.

Abstract									
District	village	TOT_WORK_P	MAIN_WORK_P	MAIN_CL_P	MAIN_AL_P	MAIN_HH_P	MAIN_OT_P	MARG_WORK_P	NON_WORK_P
Sundargarh	47	23609	13121	4886	3600	289	4346	13121	24508
Percentage		49.07	55.58%	37.24	27.44	2.20	33.12	44.42%	50.93

From the above data, it is observed that 49.07% of the population constitutes the Work Population and rest 50.93% are non-work population. Out of total work population 55.58% are main work population whereas rest 44.42% are marginal work population. The main workers are further classified to Cultivators, Agricultural labour, House hold Trade and other trade.

Occupational Profile (Main Workers)



\* Main\_CL\_P \* Main\_AL\_P \* Main\_HH\_P \* Main\_OT\_P

From occupational profile, it is observed that 4886 (37.24%) are cultivators, 3600 (27.44%) agricultural labour, 289 (2.20%) on House Hold trade and 4346 (33.12%) in other trades. Workers are mostly engaged in Coal mining and related activities.

The demographic Profile is at Annexure-V

## 2.5 Flora & Fauna:

The forests of this tract are mostly moist deciduous Sal Forest, Dry Deciduous Sal Forest, and Mixed forest with Dry Bamboo break. The Pandripani RF is coming within the Project area which is dry deciduous mixed forests with bamboo. The flora and fauna as observed during field visit is furnished below.

### 2.5.1 (Flora) Core Zone:

Sl.No.	Name	Scientific Name	Family
<b>Trees</b>			
1	Acacia	<i>Acacia auriculoformis</i>	<i>Fabaceae</i>
2	Amba	<i>Mangifera Indica</i>	<i>Anacardiaceae</i>
3	Ashwatha	<i>Ficus religiosa</i>	<i>Moraceae</i>
4	Babul	<i>Acacia nilotica</i>	<i>Fabaceae</i>
5	Bahada	<i>Terminalia belerica</i>	<i>Combretaceae</i>
6	Bara	<i>Ficus bengalensis</i>	<i>Moraceae</i>
7	Bija/Piasal	<i>Pterocarpus marsupium</i>	<i>Fabaceae</i>
8	Chara	<i>Buchanania lanzan</i>	<i>Anacardiaceae</i>
9	Haldu/Kurum/Mundi	<i>Adina cordifolia</i>	<i>Rubiaceae</i>
10	Harida	<i>Terminalia chebula</i>	<i>Combretaceae</i>
11	Jamu	<i>Syzigium cuminii</i>	<i>Myrtaceae</i>
12	Kaimu	<i>Haldinia cordifolia</i>	<i>Rubiaceae</i>
13	Kendu	<i>Diospyros melanoxylon</i>	<i>Ebenaceae</i>
14	Kusuma	<i>Schleichera oleosa</i>	<i>Sapindaceae</i>
15	Mahula	<i>Madhuca indica</i>	<i>Sapotaceae</i>
16	Mundi	<i>Mitragyna parvifolia</i>	<i>Rubiaceae</i>
17	Nima	<i>Azadirachta indica</i>	<i>Meliaceae</i>
18	Palasa	<i>Butea monosperma</i>	<i>Fabaceae</i>
19	Saguan	<i>Tectona grandis</i>	<i>Lamiaceae</i>
20	Sal	<i>Shorea robusta</i>	<i>Dipterocarpaceae</i>
21	Sidha	<i>Lagerstroemia parviflora</i>	<i>Lythraceae</i>
22	Simili	<i>Bambax ceiba</i>	<i>Malvaceae</i>
23	Sirisa	<i>Albizia lebeck</i>	<i>Fabaceae</i>

Sl.No.	Name	Scientific Name	Family
24	Sunari	<i>Cassia fistula</i>	Faboceae
<b>Shurb</b>			
25	Arakha	<i>Calotropis gigantea</i>	Apocynaceae
26	Arguna	<i>Cycas Circinalis</i>	Cycadaceae
27	Baincha koli	<i>Flacourtia jangomas</i>	Salicaceae
28	Basanga	<i>Adhatoda vasica</i>	Acanthaceae
29	Bhersunga	<i>Murraya koenigii</i>	Rutaceae
30	Bhuin Anala	<i>Phyllanthus niruri</i>	Phyllanthaceae
31	Bhuin nima	<i>Andrographis paniculata</i>	Acanthaceae
32	Bichhuati	<i>Tragia involucrata</i>	Euphorbiaceae
33	Chakundi	<i>Casia tora</i>	Fabaceae
34	Dhatki	<i>Woodfordia fruticosa</i>	Lythraceae
35	Ghurudu	<i>Gardenia gummifera</i>	Rubiaceae
36	Guakoli	<i>Maba baxifolia</i>	Moraceae
37	Kantaikoli	<i>Zyziphus aenoplia</i>	Rhamnaceae
38	Khirkoli	<i>Mymuspos hexendra</i>	Sapotaceae
39	Lajakoli	<i>Mimosa pudica</i>	Fabaceae
40	Naga airi	<i>Lantana camara</i>	Verbenaceae
41	Nalbeli	<i>Sipadesa fruticosa</i>	Meliaceae
42	Narguni	<i>Atlantia monophylla</i>	Rutaceae
43	Patalagaruda	<i>Rauwolfia serpentina</i>	Apocynaceae
44	Phanaphana	<i>Oroxylum indicum</i>	Bignoniaceae
45	Pokasungha	<i>Eupatorium odoratum</i>	Asteraceae
46	Ranidantakathi	<i>Flemingi-a-chappar</i>	Fabaceae
47	Soyam nai	<i>Ichnocarpus frutiscens</i>	Apocynaceae
48	Tilei	<i>Wedlandia tinctoria</i>	Rubiaceae
<b>Climber</b>			
49	Anantamula	<i>Hemidesmus indicus</i>	Apocynaceae
50	Atundi	<i>Combretum decandrum</i>	Combretaceae
51	Baidanka	<i>Mucuna pruriens</i>	Fabaceae
52	Dantari	<i>Acacia Pennata</i>	Fabaceae
53	Durkoli	<i>Erycibe paniculata</i>	Convolvulaceae
54	Guluchi	<i>Tinospora cordifolia</i>	Menispermaceae
55	Kaincha	<i>Abrus precatorius</i>	Fabaceae
56	Muturi	<i>Smilax macrophylla</i>	Smilacaceae
57	Raktapituli	<i>Gouarnia leptostachya</i>	Rhamnaceae

Sl.No.	Name	Scientific Name	Family
58	Satabari	<i>Asparagus racemosus</i>	<i>Asparagaceae</i>
59	Siali	<i>Bauhinia vahlii</i>	<i>Fabaceae</i>
<b>Grass</b>			
60	Baguli	<i>Eulaliopsis binata</i>	<i>Poaceae</i>
61	Bena	<i>Vetiveria zizanioides</i>	<i>Poaceae</i>
62	Chhana	<i>Imperata arundinacea</i>	<i>Poaceae</i>
63	Dhanwantary	<i>Cymbopogon martini</i>	<i>Poaceae</i>
64	Duba grass	<i>Cynodon dactylon</i>	<i>Poaceae</i>

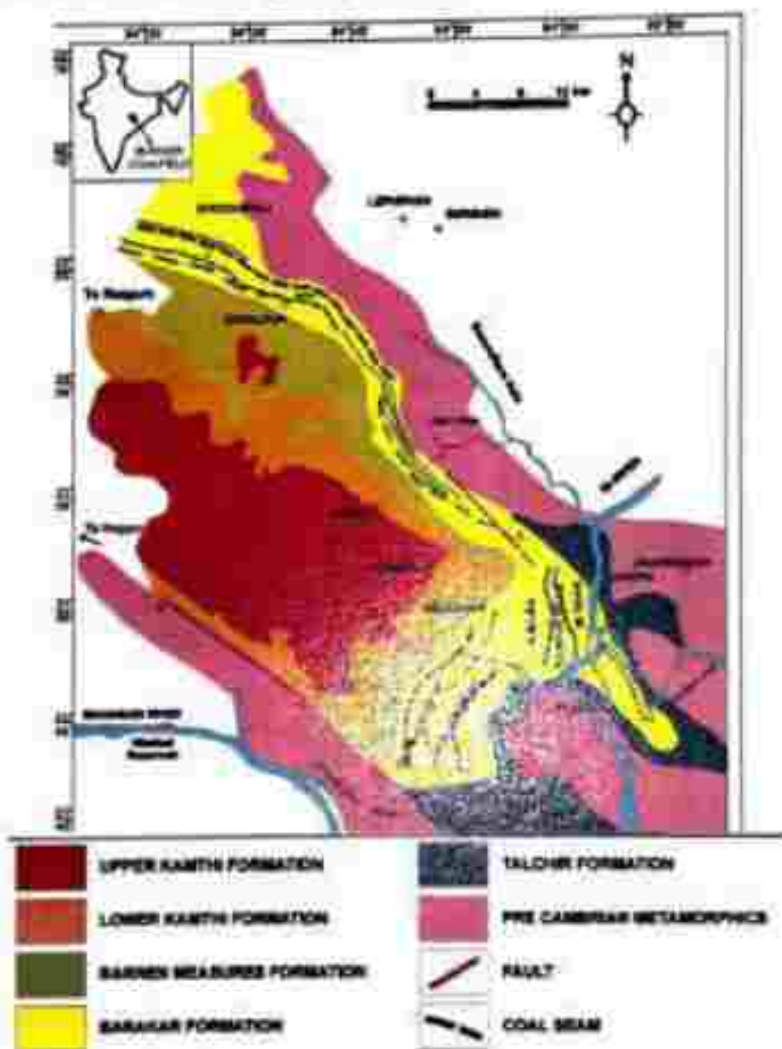
### 2.5.2 Flora (Zone of Impact)

Sl.No.	Name	Scientific Name	Family
<b>Trees</b>			
1	Acacia	<i>Acacia auriculoformis</i>	<i>Fabaceae</i>
2	Achhu	<i>Morinda tinctoria</i>	<i>Rubiaceae</i>
3	Agasti	<i>Sesbania grandiflora</i>	<i>Fabaceae</i>
4	Agnisikha	<i>Gloriosa superba</i>	<i>Colchicaceae</i>
5	Amba	<i>Mangifera indica</i>	<i>Anacardiaceae</i>
6	Ambada	<i>Spondias pinnata</i>	<i>Anacardiaceae</i>
7	Ambta	<i>Bauhinia racemosa</i>	<i>Fabaceae</i>
8	Ankula	<i>Alangium lamarckii</i>	<i>Comaceae</i>
9	Amia	<i>Emblica officinalis</i>	<i>Phyllanthaceae</i>
10	Arjuna	<i>Terminalia arjuna</i>	<i>Combretaceae</i>
11	Asan	<i>Terminalia tomentosa</i>	<i>Combretaceae</i>
12	Ashoka	<i>Saraca asoca</i>	<i>Fabaceae</i>
13	Aswastha	<i>Ficus religiosa</i>	<i>Moraceae</i>
14	Babul	<i>Acacia nilotica</i>	<i>Fabaceae</i>
15	Bahada	<i>Terminalia bellerica</i>	<i>Combretaceae</i>
16	Bandhana	<i>Desmodium oojeinensis</i>	<i>Fabaceae</i>
17	Bara	<i>Ficus bengalensis</i>	<i>Moraceae</i>
18	Barada	<i>Bauhinia retusa</i>	<i>Fabaceae</i>
19	Barbakulia / Dhobi	<i>Delbergia paniculata</i>	<i>Fabaceae</i>
20	Barkoli	<i>Ziziphus jujuba</i>	<i>Rhamnaceae</i>
21	Baruna	<i>Crataeva religiosa</i>	<i>Capparaceae</i>
22	Bastura	<i>Litsea polyantha</i>	<i>Lauraceae</i>
23	Batra	<i>Melia composita</i>	<i>Meliaceae</i>

Sl.No.	Name	Scientific Name	Family
24	Behenta	<i>Limonia acidissima</i>	Rutaceae
25	Bela	<i>Aegle marmelos</i>	Rutaceae
26	Bhaincha	<i>Flacourtia indica</i>	Salicaceae
27	Bhalia	<i>Semecarpus anacardium</i>	Anacardiaceae
28	Bhendiamardan / Genduli / Girdhini	<i>Sterculia urens</i>	Malvaceae
29	Bheru	<i>Chloroxylon swietenia</i>	Rutaceae
30	Bija/Piasal	<i>Pterocarpus marsupium</i>	Fabaceae
31	Bura / Simuli	<i>Bombax ceiba</i>	Malvaceae
32	Cashew	<i>Anacardium occidentale</i>	Anacardiaceae
33	Chadaigodi	<i>Vitex peduncularis</i>	Verbenaceae
34	Chakundi	<i>Cassia siamea</i>	Fabaceae
35	Champa	<i>Michelia champaca</i>	Magnoliaceae
36	Chandan	<i>Santalum album</i>	Santalaceae
37	Chara	<i>Buchanania lanzan</i>	Anacardiaceae
38	Chauli	<i>Elaeodendron glaucum</i>	Celastraceae
39	Chhatian	<i>Alstonia scholaris</i>	Apocynaceae
40	Chhuinpatuli	<i>Stereospermum aungustifolium</i>	Bignoniaceae
41	Dalasingha/ Kumbharchikini	<i>Canthium didymum</i>	Rubiaceae
42	Damkurudu / Katarang	<i>Gardenia latifolia</i>	Rubiaceae
43	Debadaru	<i>Polyalthia longifolia</i>	Annonaceae
44	Dhala Sirisa	<i>Albizia procera</i>	Fabaceae
45	Dhaman	<i>Grewia tiliifolia</i>	Tiliaceae
46	Dhaura	<i>Anogeissus latifolia</i>	Cambretaceae
47	Dhaurang	<i>Haloptelea integrifolia</i>	Ulmaceae
48	Dimiri	<i>Ficus racemosa</i>	Moraceae
49	Gambhari	<i>Gmelina arborea</i>	Lamiaceae
50	Gandhapalas	<i>Milusa velutina</i>	Annonaceae
51	Gangasiuli	<i>Nyctanthes arbortristis</i>	Oleaceae
52	Ganiari	<i>Cochlospermum gossypium</i>	Bixaceae
53	Genduli	<i>Sterculia urens</i>	Sterculiaceae
54	Ghantal	<i>Trema orientalis</i>	Cannabaceae
55	Ghodalanja	<i>Albizia stipulata</i>	Fabaceae

## 2.4 Other Projects within ZOI & their Impact Zone:

Ib Valley Coalfield lies between latitudes 21° 41'N and 22° 06'N and longitudes 83° 30'E and 84° 08'E. It covers an area of 1,460 square kilometers.



Ib-valley coalfield is located within the districts of Sundergarh, Jharsuguda and Sambalpur of Orissa state and covers an area of about 1460 Sq. Kms. The coalfield is named after the river Ib, a tributary of river Mahanadi, which passes through the eastern fringe of the coal field. The Ib Valley coalfield forms a half elliptical basin. It is closed towards south east and open towards north-west. The basin has normal contact with the metamorphics in the north-western, northern, north-eastern, eastern and southeastern part. It has a faulted contact with the metamorphics in the south-western boundary where younger formations viz. Raniganj and Barren Measure occur in juxtaposition with the

metamorphic. The coalfield is contiguous to Mand-Raigarh coalfield of Chhatisgarh. The boundary between Mand-Raigarh and Ib Valley coalfield is administrative boundary of Odisha and Chhatisgarh states. Barakar and Karharbari are the two potential coal bearing formations in Ib Valley coalfield, Barakar formation is the store house of majority of coal seams. The potential coal bearing area (excluding Kamthis, non coal bearing Lower Karharbari Formation) of the coalfield is about 300 sq. km stretching along the south, east and northern periphery of the coalfield.

Due to this huge deposit of coal in this belt there are many coal blocks in the region close to each other forming a belt of Mining around 35km long and 15 km wide. The Kulda OCP is approximately towards South East of the coal belt. There are many mines surrounding this project.

### **2.9 Interventions Implemented by Forest department:**

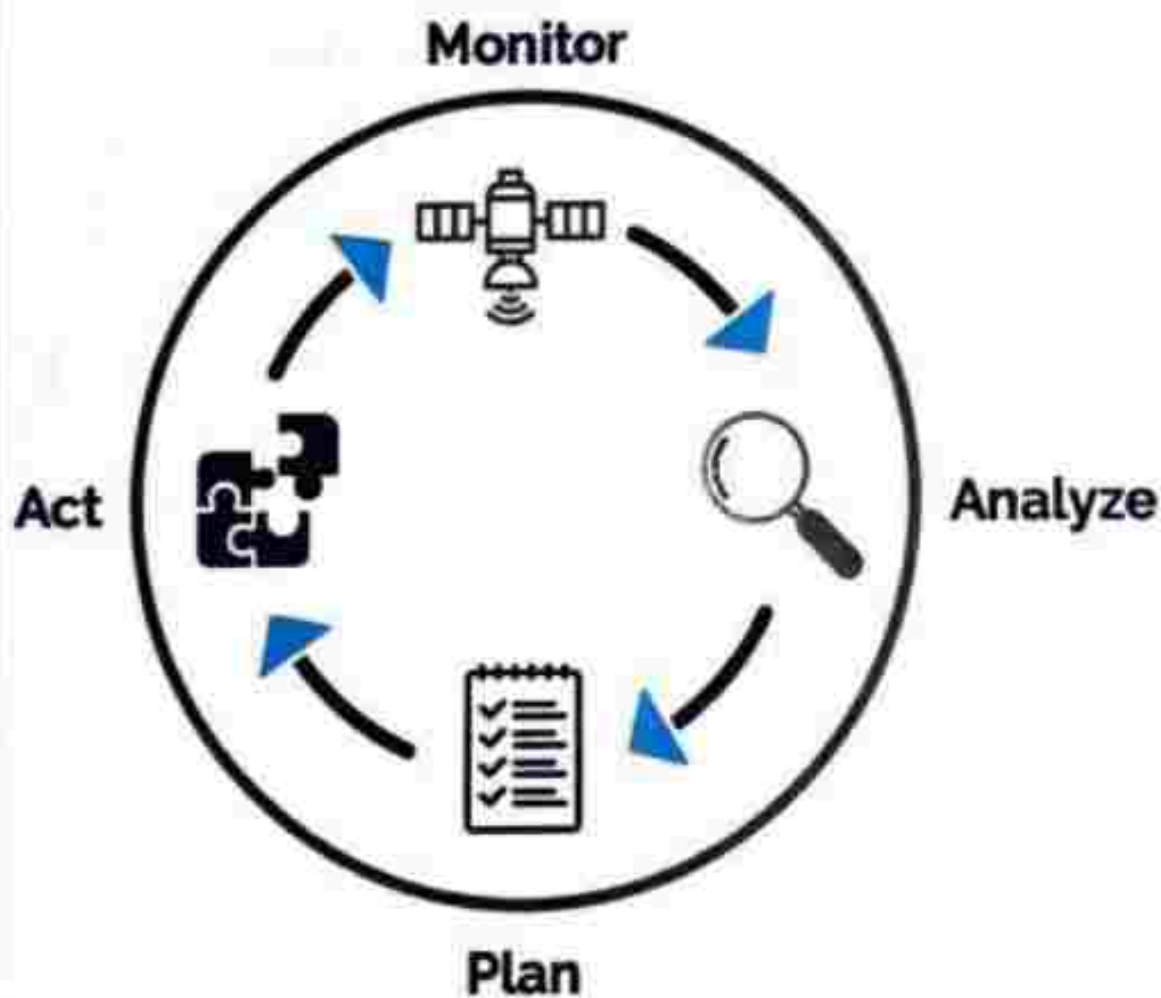
The Forest Department is implementing the following interventions for management of Wildlife in this locality.

- 1) Deployment of Squad for tracking of elephants, taking steps against crop depredation and preventing elephant movement through habitations.
- 2) Improving habitat by planting fruit bearing trees, Improvement of Bamboo Forests by bamboo plantation,
- 3) Creating Water body, Improvement of water sources etc.
- 4) Construction of Water Harvesting Structures,
- 5) Deploying Gaja Sathi in elephant depredation prone areas,
- 6) Providing search lights, Solar lights,
- 7) Immediate assessment of crop damage / house damage and payment of Compassionate grant.
- 8) For peoples Participation and to reduce dependency on forests various alternate Livelihood activities are being implemented through OFSDP Projects.



## CHAPTER-06

### FINANCIAL IMPLICATIONS & MONITORING



## CHAPTER-06

### Financial Implications & Monitoring

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#### 6.0 Summary of Mitigation Measures:

Various mitigation measures have been suggested considering the effect of the washery project during operation phase under Chapter-04. These are summarized below.

#### 6.1 Summary of activities to be implemented by User Agency (MCL, Basundhara Area):

- 1) **Maintaining Green Belt:** A thick Green belt of 30m wide all along the project periphery will be developed with indigenous plants with heavy foliage, A 3 tire planting design has been suggested. The total area assigned for Green belt is minimum 33% i.e. 14.48 ha. A plant density of 2500 trees per ha is suggested [Trees: 1600 numbers, Herbs & Shrubs: 900 numbers].
- 2) **Green belt along Roads etc- Probable location of Dust Generation:** Green belt along transport road within the project area, Coal washing reject, around crushing units- depending upon availability of land.
- 3) **Dust Suppression:** Suppression of dust using modern dust suppress equipment like Cold / Dry Fog dust suppression system.
- 4) **Managing Site Illumination:** The illumination system in the project site will be designed to fix complete downward and no illumination will flood towards forest / outside the boundary. The light mast will be also at a reasonable height so that light outside the project unit is reduced.
- 5) **Institutional Plantation:** In order to enhance tree cover outside the forest (TOF), every year 5 schools (preferably eco club schools)/ hospitals / Govt. institutions etc will be selected and tree planting with adequate protection and maintenance for 5 years will be taken up. During the plan period 25 institutions will be taken up for this.
- 6) **Conservation of Avifauna:** For conservation of avifauna motivation of local inhabitants will be taken up through awareness camps. Adequate eco- friendly nest will be fixed in villages- Conservation of Sparrows, Parakeets will be popularized. [Box nest- 300 numbers size L-25cmxW-20cmxH-25cm with hipped roof; Earthen nest- 400 numbers to be distributed in habitations, Birds conservation awareness camps- 20 numbers]

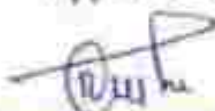
- 7) **Construction of Temporary Check dams ( By sand bag):** Temporary Check dams / Cross bond (Sand bag cross bonds) will be provided in Basundhara nala from October to June to maintain water flow; (at least 4 sites at an interval of 1km)
- 8) **Storm Water Management In Project area:** The runoff from the project site are to be channelized to siltation tanks and after settling of sediments, the water may be released to natural water course. At least 2 siltation Tanks to be provided
- 9) **Renovation of Village Ponds:** Conservation of surface water by renovating Village ponds @ 3 numbers per year, (total- 15 numbers of Pond)
- 10) **Reducing Surface water Turbidity by adding Coagulants:** The pond water which looks turbid during February- May will be kept clear by adding Lime – as a coagulant as and when required. At least twice in a year for each pond. The village ponds within 5km Radius will be treated.
- 11) **Height of Conveyor belt i.e. Ground Clearance:** The ground clearance of Conveyor belt near to Basundhrara nala is to be maintained above 6m to allow free passage of animals along the Basundhara nala which is being maintained as an animal passage / Corridor;
- 12) **Height of High Level Bridge:** The High Level Bridge will also be above 6m from the Ground Level.
- 13) **To deposit 5% of the project cost in accounts of "the Wildlife Society, Odisha" to meet the unforeseen interventions those may come up in the time gap between approval of the Plan and Implementation; the amount comes to Rs 33.83 Lakh.**

#### 6.1.1 Abstract of works to be implemented by User agency (MCL):

Sl No	Description	Work prescribed
1	Maintaining Green Belt over 33% of Project area i.e. 14.48 ha	A plant density of 2500 trees per ha is suggested [Trees: 1600 numbers, Herbs & Shrubs: 900 numbers].
2	Green belt along Roads etc- Probable location of Dust Generation	Green belt along transport road within the project area, Coal washing reject, around crushing units- depending upon availability of land, (Within 33% of area projected above).
3	Dust Suppression	Suppression of dust using modern dust suppress equipment like Cold / Dry Fog dust suppression system.
4	Managing Site illumination:	To fix lights complete downward and no illumination will flood towards forest / outside the boundary

5	Institutional Plantation:	Every year 5 schools (preferably eco club schools)/ hospitals / Govt. Institutions etc; Total 25 institutions
6	Conservation of Avifauna:	Fixing Box nest- 300 numbers size L-25cmxW-20cmxH-25cm with hipped roof; Earthen nest- 400 numbers to be distributed in habitations Birds conservation awareness camps- 20 numbers – to be covered in 3 years
7	Construction of Temporary Check dams ( By sand bag):	To be provided in Basundhara nala from October to June to maintain water flow; (at least 4 sites at an interval of 1km)
8	Storm Water management in Project area	The runoff from the project site are to be channelized to siltation tanks and after settling of sediments water to be released. – at least 2 siltation Tanks to be provided
9	Renovation of Village Ponds	Conservation of surface water by renovating Village ponds @ 3 numbers per year, (total 15 numbers to be renovated)
10	Reducing Surface water Turbidity by adding Coagulants	Coagulant as and when required to be added. At least twice in a year for each pond. The village pans within 5km Radius will be treated.
11	Height of Conveyor belt i.e. Ground Clearance:	Conveyor belt to be with more than 6m height Clearance from Ground level;
12	Height of High Level Bridge:	Above 6m from the Ground Level.
13	Deposit in accounts of "the Wildlife Society, Odisha"	5% of the Project cost i.e. Rs33.83 Lakh to be deposited.

Approved



 Principal Chief Conservator of Forests  
 (Wildlife) & Chief Wildlife Warden  
 Odisha, Bhubaneswar



 STAFF OFFICER (Envt. & Forest)  
 BASUNDHARA AREA



 DIVISIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION



D	Peoples Participation	Unit	5.00 L	2	10.00	Hemgir and Lephripada Range. ➤ Training for identification of quality Plus trees of different species including field demonstration; ➤ Grading of seeds including purchase of equipment, ➤ Storage & marketing. ➤ Administratively assisting in marketing through Silviculturist, Various divisional supply.
9	Quality Seed Collection & Marketing (Forest Species)	Unit	5.00 L	2	10.00	
E	Public Awareness:					
11	Creating awareness through Wall Posters;	No	5000/-	47*5	11.75	On Forest Fire, Animal Behaviours & Public Response, Crime against Wildlife; on Environment protection and legal provision
12	Deployment of "Sachetana Ratha" – Awareness Chariot;					
a	Engagement of Vehicle	No	35000/- P.M	6*5	10.50	
b	One e-Display Screen ( LED Screen)	No	On Ls	One set	5.00	



Site Specific Wildlife Conservation Plan for Establishment of Basumithara Cool Washery of 10 MTPA capacity by M/s Mahanadi Coalfield Limited, Basumithara Area under Sundargarh District / Sundargarh Forest Division.

c	Lap top / Video Clips and other accessories	No	On	One Set	3.00
d	POL Expenses	Monthly	@20000/- P.M	6*5	6.00
e	Remuneration to P NGO		30000/- PM	2*6*5	18.00
f	Contingency		1.00Lakh	5	5.00
13	Organizing Group Discussion:	No	5000/-	47*5	11.75
14	Awareness through Road Show / Folk Dance:	Annual	3.00 Lakh	5	15.00
14	Publication of IEC materials	Annual	4.00L	5 Yr	20.00
F	Circle Level monitoring & Supervision - Up-gradation of Technical support				
15a	Installation of 4kiCAM & Accessories:	Ls			20.00
15b	Engagement of Hired Vehicle for Circle level	Monthly	Rs0.32L	60m	19.20
					Regional Circle Office, Rourkela
					For facilitating movement of various officials engaged in



Site Specific Wildlife Conservation Plan for Establishment of Basundhara Coal Washery of IO MTPA capacity by M/s Mahanadi Coalfields Limited, Basundhara Area under Sundargarh District / Sundargarh Forest division.

Elephant Cell:	Monitoring				Elephant Monitoring Cell at Circle level,
15c	Providing POL Cost:	Monthly	15000/-	60m	9.00
15d	Monitoring / Analyzing accessories:	Ls			5.00
G	Monitoring & Evaluation				
16	Monitoring & Evaluation	Ls			5.00
	S. Total				563.794
	Add 20% for Cost-escalation				112.759
	<b>Total</b>				<b>676.553</b>

(Rupees Six Crore Seventy Six Lakh Fifty Five Thousand and Three Hundred Only)

Approved

STAFF OFFICER (E.M.T. & Forest)  
BASUNDHARA AREA

District Officer  
(Wildlife) & Chief Wildlife Warden  
Girish, Bhubaneswar

DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



Site Specific Wildlife Conservation Plan for Establishment of Basundhara Coal Washery of 10 MTPA capacity by M/s Mahanadi Coalfields Limited, Basundhara Area under Sundergarh District / Sundergarh Forest division.

	Fin:	5.00	1.00	1.00	1.00	1.00	1.00	1.00
S. Total		561.794	242.159	110.409	70.409	70.409	70.409	70.409
Add 20% for Cost escalation		112.759	48.432	22.082	14.082	14.082	14.082	14.082
<b>Total</b>		<b>676.553</b>	<b>290.591</b>	<b>132.491</b>	<b>84.491</b>	<b>84.491</b>	<b>84.491</b>	<b>84.491</b>

### 6.5 Plan Period:

This plan is valid for 5 years i.e. from 2025-26 to 2029-30.

### 6.6 Monitoring & Evaluation:

The implementation of this plan may be periodically monitored by a committee headed by the Regional Chief Conservation of Forests, Rourkela Circle. The Divisional Forest Officer, Sundargarh Division and representative of MCL may be invited to the review meeting.

### 6.7 Interim Review & Revision of the Plan:

The Plan period is for five years and will be revisited by the DFO, Sundargarh at least one year before expiry of its implementation. The user agency will bear the cost of such plan on its approval. Further the user agency will bear additional cost, if any towards enhancement of wage rate and escalation of price of materials at the time of implementation of this plan. In case of any deviation, it will be dealt as per law for violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Environment (Protection) Act, 1986 and Wildlife (Protection) Act, 1972.

### 6.8 Projected Plan Cost:

The Plan cost is projected at Rs 676.553 Lakh (Rupees Six Crore Seventy Six Lakh Fifty Five Thousand and Three Hundred Only.)

Sl. No	Agency	Amount in lakh Rs
1	User Agency	Works enumerated. No financial projection.
2	Forest Department	
a)	Sundargarh Division	676.553
<b>Total</b>		<b>676.553</b>

Table 5 Total Projected Plan Cost (WLCP)

### 6.9 Executing Agency:

The proposed interventions under Para 6.1 will be implanted by User agency at the project cost.

The interventions suggested under Para 6.2 and 6.3 will be implemented by the Divisional Forest Officer, Sundargarh Division.


### 6.10 Conclusion:

On approval & implementation of this Plan, it is expected to improve recharge of Ground Water and better Wildlife Management. Concentration of animals along the River

Approved

  
STAFF OFFICER (Envt. & Forest)  
BASUNGHARA AREA

  
Principal Chief Conservator of Forests  
(Wildlife) & Chief Wildlife Warden  
Odisha, Bhubaneswar

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

Basundhara will increase. The water availability will increase and need of animals will be catered.





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

Government of Odisha, Forest, Environment & Climate Change Department  
PRAKRUTI BHAWAN, PLOT NO. 1459, SAHEED NAGAR, BHUBANESWAR- 751007  
Phone: 0674-2802250, Website: www.wildlife.odisha.gov.in, Email: odishawildlife@gmail.com

No. 4608 /CWLW-FDWC-FD-0100-2024  
Dated, Bhubaneswar the 25 April, 2025

To

The General Manager  
Basundhara Area  
M/s. Mahanadi Coalfields Limited

Sub: Proposal for diversion of 29.41 ha. of forest land (20.89 ha. Forest land and 8.52 ha. Of forest land for re-diversion out of already diverted forest area of 227.89 ha. Of Kulda OCP for construction of Basundhara Coal Washery (10 MTY) by M/s. Mahanadi Coalfields Ltd. - Approval of SSWLCP.

Sir,

I am directed to convey the approval of PCCF (WL) & CWLW, Odisha for the Site Specific Wildlife Conservation Plan at a total financial outlay of ₹676.553 Lakh (Rupees Six Crore Seventy-six Lakh Fifty-five Three Hundred) only as per the details of activities mentioned in Chapter-06 of the Plan, prepared in compliance to condition no. 4.1 (a) (iii) of the Environmental Clearance granted by MoEF&CC, New Delhi vide Letter No. J-11015/435/2013-IA-II (M) dated 31.10.2019.

A sum of ₹676.553 Lakh (Rupees Six Crore Seventy-six Lakh Fifty-five Three Hundred) only may be deposited in the State CAMPA fund through portal (<https://parivesh.nic.in>) for the purpose of implementation of various activities within the project impact area in Sundargarh Forest Division.

2. Activities in the project area of the Plan will be executed by the Project Proponent under the guidance of the concerned DFO as per the activities mentioned in Chapter-VI of the plan. Further, the User Agency shall deposit 5% of the plan cost over and above the approved cost of SSWLCP in the A/c. of the society "The Wildlife Odisha" maintained in this office towards unforeseen interventions.

3. The Plan period is five years and will be revisited by the concerned DFO at least one year before expiry of its implementation. The User Agency will bear the cost of such Plan on its approval. Further, the User Agency will bear additional cost, if any, towards enhancement of wage rate and escalation of price of materials at the time of implementation of this Plan.

P.T.O.

In case of any deviation, it will be dealt as per law for violations of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Environment (Protection) Act 1986 and Wildlife (Protection) Act 1972.  
Encl.: Copy of the approved SSWLCP.

Yours faithfully,

  
Chief Conservator of Forests (WL-II)

Memo No. 4609 Date 25/04/2025  
Copy forwarded for information and necessary action to the: -

1. OSD-cum-Special Secretary to Government in FE&CC Department, Odisha, Bhubaneswar.
2. Addl. PCCF (FD & NO, FC Act), O/o. the PCCF & HoFF, Odisha, Bhubaneswar with reference to Memo No. 1871 dated 08.04.2025 of the Divisional Forest Officer, Sundargarh Forest Division.
3. Regional Chief Conservator of Forests, Rourkela Circle along with copy of the approved SSWLCP with reference to Memo No. 1870 dated 08.04.2025 of the Divisional Forest Officer, Sundargarh Forest Division.
4. Divisional Forest Officer, Sundargarh Forest Division along with copy of the approved SSWLCP with reference to his office Memo No. 1869 dated 08.04.2025 addressed to this office.
5. Deputy Conservator of Forests (JTF), O/o. the PCCF(WL) & CWLW, Odisha, Bhubaneswar. He is requested to raise demand to the User Agency for deposit of 5% cost over and above the approved cost of SSWLCP as contribution to the account of the society "The Wildlife Odisha".

  
Chief Conservator of Forests (WL-II)



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

Office of The General Manager  
Basundhara Area  
ATPO-Basundhara-770076  
Dist-Sundargarh (Orissa)



**MCL**

Annexure-XIX

**UNDERTAKING FOR NO DAMAGE TO FLORA AND FAUNA**

(Condition No. (xviii))

We do hereby undertake that no damage to the flora and fauna of the adjoining area shall be caused for any activities.

  
29/10/19  
General Manager  
Basundhara Area  
General Manager  
MCL, Basundhara Area

  
Divisional Forest Officer  
Sundargarh Division



## Schedule

For surrender of mined outland reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

---

Compliance to Condition No 5 of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025.



Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.

Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.

## 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million Tonnes. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closure Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/MIN/50293/2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 5 reads as follows.

"5. The user agency shall prepare a schedule for surrender of the mined out and reclaimed forest land in accordance with existing mine plan and submit the same along with an undertaking to surrender the mined out and reclaimed forest land as per such schedule to the ministry before grant of final approval under the Adhiniyam for diversion of said forest land."

This Schedule of surrender is being prepared accordingly.

## 2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.



Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Bansuda		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
	diverted area		35.81	35.81	32.33	86.61	118.94	154.75
	total		68.55	68.55	1.21	27.22	28.43	96.98
	Lamla RF	88.25	0	88.25	109.20	353.74	462.94	88.25
		88.25	274.33	362.58	99.99	4.33	104.32	825.51
		0	0	0	209.19	358.07	567.26	104.32
		88.25	274.33	362.58				929.83
				(-)8.52				(-) 8.52
				354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest Clearance has been obtained for 227.89 ha vide Order F.No 8-176/1997-FC 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in-principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.



Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	Infrastructure including Safety and Zone Embankment	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	External dump	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Total	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5	Redirected Washery for	(-)8.52	0	(-)8.52				
	Total	219.375	406.315	625.69	134.69	160.93	295.62	921.305

### 3. Types of Mining Closure Plan.

There are two types of Mine Closure Plan i.e.

- Progressive mining Closure plan;
- Final Mine Closure Plan.

#### 3.1 Progressive mine Closure Plan:

The progressive mine Closure plan is being intended to provide protective reclamation and rehabilitation measures on a mine or part thereof.

#### 3.2 Final Mine Closure Plan:

The Final mining Closure Plan is prepared for the purpose of decommissioning rehabilitation and reclamation in the mine or part thereof after cessation of mining and its related activities. The final Closure plan address all environmental aspects taking in to consideration.

The final mine closure activities usually start towards the end of mine life and may continue even after reserves are exhausted and / or mining is discontinued till the mining area is restored to an acceptable level to create a self-sustained ecosystem.



Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kulda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfield limited.

### 3. 3 Reason for Closure of Mine:

On following grounds, the mine Closure situation will arise. These are

- a) Coal will be exhausted during Mine Life,
- b) All overburden will either be back filled or will be dumped externally.

### 4. Progressive Mine Closure:

Mine Closure operation is a continuous series of activities starting from day one of the initiation of mining project. Therefore progressive mine Closure plan is a continuous process throughout the life of the mine reviewed & modified periodically. This includes various land reclamation activities to be taken up continuously and during entire life of the mine. This is a life time of mine process which starts from commencement of mining operation and leads to the final Closure of the mine.

#### 4.1 Activities of Progressive Mine Closure Plan:

For Closure of the Mine the following activities are involved.

- a) OB dump Reclamation;
  - Handling & dozing of OB dumps and back filling.
  - Technical and Bio reclamation including Plantation.
- b) Grass carpeting / plantation around the quarry and in Safety Zone,
- c) Grass carpeting / plantation over external OB dump,
- d) Other Mitigative Measures.

#### 4.2 Present activities towards Reclamation / mine Closure:

Presently internal dumping has been started. External dumping is also continued. The reclamation schedule as provided in the Mining Plan is furnished below.

Stage / Year	Land degraded (Ha)	Technically reclaimed area (in ha)				Percentage of Reclamation
		Back Filling	Dump	Others	Total	
Up to base Year	531.753	172.55	88.96	20.00	281.51	52.9
Y-1 2022-23	597.683	193.55	106.96	25.00	325.51	54.5
Y-3 2024-25	704.243	235.55	124.96	30.00	408.51	58.0




Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kolda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mahanadi Coalfields limited.

Y-5	2026-27	785.475	277.55	178.932	40.00	496.482	63.2
Y-11	2032-33	921.305	393.94	178.932	60.72	633.592	68.8
Post Closure							
Y-14	2035-36	921.305	539.98	178.932	202.393	921.305	100



The above chart indicates progressive reclamation of Mines degraded area (Year wise). At present, the approved Mining Plan of the project does not envisage surrender of the mined out and reclaimed forest land during the operational life of the mine. However, Mahanadi Coalfields Limited (MCL) is fully committed to comply with this condition. As and when the revised/updated Mining Plan incorporates a provision for surrender of the mined out and reclaimed forest land, MCL shall prepare a schedule for phased surrender in line with the approved plan and submit the same schedule to the Ministry. MCL will take timely action to surrender the reclaimed area in accordance with the approved schedule.

An undertaking to this effect is enclosed here with.

  
 General Manager,  
 Basundhara Area, MCL  
 Sundargarh  
 Project Director  
 Kolda Open cast Project  
 सुन्दरगढ़ क्षेत्र

  
 DIVISIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION



Schedule for surrender of mined out and reclaimed forest land in accordance with existing mining plan for Kunda OCP (Extension) project, Basundhara Area, District: Sundargarh by Mohanadi Coalfield limited.



## Undertaking

(Ref: Condition no 5 of In-Principle approval Orders dated 10.07.2025)

(Proposal No FP/OR/MIN/50293/2020)

We undertake to surrender the mined-out and reclaimed forest land strictly as per the approved Mining Plan / any revised Mining Plan and in consultation with the State Forest Department, and to submit the schedule to MoEF&CC for final approval.

  
General Manager,

 Basundhara Area, MCL

Project Officer  
Kunda Opencast Project  
ପରିଚାଳନା ଅଫିସର  
କୁଣ୍ଡା ଓପିକାସ୍ଟ

Technically Approved

  
Regional Chief Conservator of Forests  
Rourkela Circle

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**AGENCY COPY**

यूनियन बैंक  **Union Bank**  
OF INDIA

**NEFT / RTGS CHALLAN for CAMPA Funds**

Date : 16-07-2025

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	525223448
NEFT/RTGS Pk No.	5-47/2524-FC
Location.	ORISSA
Address.	Kulda OCP, MCL, Basundhara Area, Sundergarh, Odisha 772075 Sundergarh
Amount(In Rs.)	111812000/-

Amount in Words: Eleven Crores Fifteen Lakh Twelve Thousand Rupees Only

NEFT/RTGS to be made as per following details:

Beneficiary Name:	ORISSA CAMPA
IFSC Code:	UBIN0001315
Pay to Account No.	150022000000448 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India PCS Centre, 21/1, B Floor, Jubilee Towers, Mission Road, Bangalore-560027

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

**BANK COPY**

यूनियन बैंक  **Union Bank**  
OF INDIA

**NEFT / RTGS CHALLAN for CAMPA Funds**

Date : 16-07-2025

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	525223448
NEFT/RTGS Pk No.	5-47/2524-FC
Location.	ORISSA
Address:	Kulda OCP, MCL, Basundhara Area, Sundergarh, Odisha 772075 Sundergarh
Amount(In Rs.)	111812000/-

Amount in Words: Eleven Crores Fifteen Lakh Twelve Thousand Rupees Only

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- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Note: After making the required payment through challan, if the payment status has not been updating even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: [training@unionbankofindia.bank](mailto:training@unionbankofindia.bank), [spurse@unionbankofindia.bank](mailto:spurse@unionbankofindia.bank), [ubinfo202770@unionbankofindia.bank](mailto:ubinfo202770@unionbankofindia.bank)

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17 JUL 2025  
Journal No

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17 JUL 2025  
Journal No

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MCL, BASUNDHARA AREA

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16/07/25

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MCL BASUNDHARA AREA

SBENRS202502169252223



## **Site Specific**

**Wildlife Conservation Plan for Expansion of Kulda Opencast Coal Mine Project (from 634.205 ha to 921.305 ha) by MCL, located in IB Valley Coal Field (Basundhara Area) at village Balinga and 4 others under Hemgir Tahasilof Sundargarh District, Odisha**



**By  
Divisional Forest Officer,  
Sundargarh Division**

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## Executive Summary

- Mahanadi Coalfields Limited (MCL) is one of the major coal producing company of India.
- It is one of the eight subsidiaries of Coal India Limited. Mahanadi Coalfields Limited was carved out of South Eastern Coalfields Limited in 1992 with its headquarters at Burla, Sambalpur.
- Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited.
- The mine has an expansion plan to increase capacity by an additional 5 million tones.
- In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC).
- In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha.
- For enhancement of Production from existing capacity to 21.0 MTPA with an increase in area from 634.205 Ha to 921.305 ha "Terms of Reference" has been granted vide File No. J-11015 / 10/1995-IA-II (M) dated 13.12.2022
- The total forest area involved in Kulda OCP is 362.58 ha. Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha.
- For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and under consideration of various authority.
- The Zone of Impact of the project is the area coming within 10km radius from the boundary of the Project. For Kulda OCP, the Zone of Impact (Study area) computed to be 450 sq. km and coming in Sundargarh Division / district.
- There are many Coal blocks in the IB valley area.
- Some of the mines are Basundhara (East) OCP, Basundhara (W) OCP, Kulda OCP, Garjanbahal OCP, Siarmal OCP, Rampia and Dip side of Rampia, Manoharpur and Dip Manoharpur, Dulunga of NTPC, Meenakshi Coal Block Meenakshi B & DIP Extension, Chhatabar East & West and Jamkani

- Considering the overlapping nature of the zone of Impact, additional zone of Impact coming within 15 km (10km Study area + 5 km Add. Zone of Impact) has been taken.
- In the study area it is observed that 40.84% of the area is under cultivation. Forests constitutes 32.36%, the second favoured land use. Mining constitutes 5.79%, waste land 14.41%
- Within the Mining Lease area there are five villages namely Balinga, Tumulia, Siarmal, Kulda and Bankibaha of Sundargarh district.
- The zone of impact comes within Sundargarh district. There are 70 villages.
- The total population is 68911 in 17002 house hold. The family size is 4 people per family (i.e. Core family). The SC and ST Population is 11.60% and 57.40 % respectively. The area is considered as Scheduled area (Tribal dominated area). The literacy percentage is 60.05%
- On analysis of Census data (2011), it is observed that out of 68911 people residing in the Zone impact, 33929 (49.23%) are working population and 34982 (50.77 %) non working population.
- The working population is further classified as Main Workers and Marginal Work Population. Out of main workers 7092 (20.90% of total main workers) are cultivators, 13.39% (4543) are agricultural labours, 1.31% engaged in House Hold business. About 20.40% are engaged in other trades like Mining, transportation sectors.
- Agricultural dependency is quite high and provides main livelihood support to 34.29% which is quite high.
- The forests of this tract are mostly moist deciduous Sal Forest, Dry Deciduous Sal Forest, and Mixed forest with Dry Bamboo break.
- The Lalma RF is coming within the mining lease area which is dry deciduous mixed forests with bamboo.
- There is no endangered flora in this zone of impact. There is Schedule-I Faunas in this tract.
- The forests observed in this zone of impact can be broadly classified as 3C North Indian Moist Deciduous Forest and 5B Northern Tropical Dry Deciduous Forest as per Champion and Seth classification of the forest types of India on basis of climate, moisture condition and eco-types.
- There are 35 Forest Blocks within the Zone of Impact.

- The project i.e. Kulda OCP is not a part of any Wildlife Sanctuary, National Park, Protected area. It is also not part of any Eco- Sensitive Zone of any Wildlife Sanctuary, National Park, and Protected area.
- Due to dense forest of Garjanpahad, RF, Dhanubansha RF it is a good habitat for migratory elephant, Leopard, Tiger and Panther. Recently Panther and RBT has been observed in the forests of Hemgir, Gopalpur Range.
- Elephants are used to migrate from Chhattisgarh enters to Hemgir / Gopalpur forests and move towards Jharsuguda.
- Due to migration of elephant man- animal conflict is persisting throughout the year. Due to heavy mining in the ZOI, the animals keep away from this Zone of Impact.
- Elephant Reserve and Wildlife sanctuary of neighboring state are situated very close to the Border of the Division.
- Movement of Elephant from these protected areas and its adjacent forest to Sundargarh Division.
- The division is affected by Elephant Movement from three sides i.e. From Bamra- Jharsuguda Division, Chhattisgarh- Jharkhand State.
- The Forests of Hemgir recorded presence of Panther "Black Tiger". The other notable animals are Leopard, Elephants, Hyena, Jungal cat, Sloth Bear, Bear, Fox, Jackal, Wolf, Python, Cobra, Naga, Peafowl, Parakeets, Hill Myna are common animals, Reptiles, birds etc.
- There is no wildlife Corridor in the Division. However movement of elephant is very erratic around the Zone of Impact. Better presence of elephant is felt near to Garjan Pahad RF in Hemgir range. Movement in Gopalpur range now is not so remarkable but occasional presence causes panic among the staffs / public.
- The Kulda OCP project has Geological Reserve is 438.90 Mt and Extractable Reserve os 339.56 Mt
- Percentage of Recovery w.r.t geological reserve (Opencast mining): 77.36%
- Existing & Proposed method of Mining is Shovel- Dumper in OB & Surface Mineral / Pay loader / Truck in Coal
- Life of the Mine is projected at 11 years with targeted production of 21 Mt.
- Capacity of End user Plant is the Basket Linkage;
- Number of Villages to be affected are 5 villages (975 Project Affected Family)
- Ground Water table is Varying from 1.15m to 7.65m BGL

- Water requirement of the project is 4412 KLD
- Chhatanjhor passing through the Lease area has already been diverted/ straightened.
- The area drains to Chhatanjore and ultimately to Basundhara nala;
- It is estimated that 266.49Mt Mineable coal would be available for extraction within the Mine boundary;
- The total overburden to be removed is estimated at 377.363Mcum.
- The stripping ratio is 0.86 cum / t
- Striking Length (along Floor) is max: 2300m, Min:500m
- Striking Length (along Surface) is max: 2430m, Min:820m
- Depth of Mining Maximum- 200m, Minimum: 10m and Perimeter: 9630m
- About 73Mcum OB to be dumped outside the quarry
- OB is being dumped on Chattenjore to form embankment of Basundhara Nalla, / River. (Additionally 1.11 Mcum has been dumped.
- Backfilling has already started;
- For Coal seams Maximum bench height-10m, working bench width 32m / 37m, & Bench Slope 70<sup>o</sup> will be maintained.
- For OB ( 5.5 Cum EHS / 10 ERS ) Bench Height Maximum- 10 m for 5 cum EHS, 15 m (for 10 cum ERS), Working bench width -37m / 50 m; Bench slope 70<sup>o</sup> will be maintained
- There are 2 dumps (Dump No 1 adjoining Garjanbahal Forests block where about 33.83 Mcum already dumped.
- Dump No 2-on dip side of Kulda Block Capacity about 31.94 Mcum (Not yet started)
- About 1.11 Mcum OB dumped in Chatten jhor and Basundhara nala to form embankment.
- Power Supply from 220 KV main sub- station at Garjanbahal,
- The various anticipated source of Danger in the mining are Slope failure, Danger due to handling and use of explosives, Accidents due to fly rocks and air- blasts following a faulty heavy blast; Hazards associated with use of electricity;
- Accidents due to spontaneous heating of Coal in stack piles and exposed benches, Dust hazards and Accident due to unruly operation of HEMM;
- Danger of Inundation from surface water / Ground water / flash flood in Basundhara nala;
- Accumulation of noxious gases / fumes in deep pits

- The present life of Kulda mine is only 2 years left. On the event of operation of the mines, the supply of coal to power plants getting through Basket Linkage will be un interrupted and production of power and supply through National Power Grid will be ensured.
- Source of livelihood for many directly employed and indirectly depending upon these mining activities will be secured.
- Fugitive dust including coal dust is likely to be generated at drilling in overburden benches the dust concentration varies between 20–25 mg/m<sub>3</sub> and in coal benches it varies between 15 – 30 mg/m<sub>3</sub>. Thereafter haul road, drilling perhaps the next important source of fugitive dust. Loading and unloading of coal is also a major point source of fugitive dust generation.
- Create more vegetation / tree cover outside the Forests and increase crop density of degraded forests through appropriate Silvicultural practices;
- To take up institutional plantation in Schools / other available institutions and in village vacant lands within 15 km -20km belt.
- Develop avenue plantations on Rural roads / Embankments.
- Encourage Farm Forestry – Distribution of Fruit bearing species to increase “Tree Outside the Forest”
- Due to blasting noise & vibration are associated. Further noise is generated for running vehicles, Train movement, conveyor belt running crushing at coal handling plants etc.
- Heavy noise scare the animals, hamper communication between animals, reduced libido in animals, hampers in night resting of animals / birds, disturb movement of nocturnal birds / animals.
- Noise induces stress in all animals / human being etc. If animals / birds are exposed to high intensity noise, they may develop hearing deficiency. This leads to ease pray to predators and reduction of animal concentration ratio / balance.
- Noise less / Reduced technology for Blasting to be adopted ,
- A dense Safety Zone / Maintaining corridor along the Basundhara Nala
- Good Maintenance of all transport vehicles and HEMM
- The surface water is being polluted due to Settlement of air borne dusts / Coal dust, Washouts from coal stacks / OB Dumps containing coal dusts / heavy metals and silting up the water body, Increase in water turbidity.
- Mine run off flowing down to the rivers / nalla ,

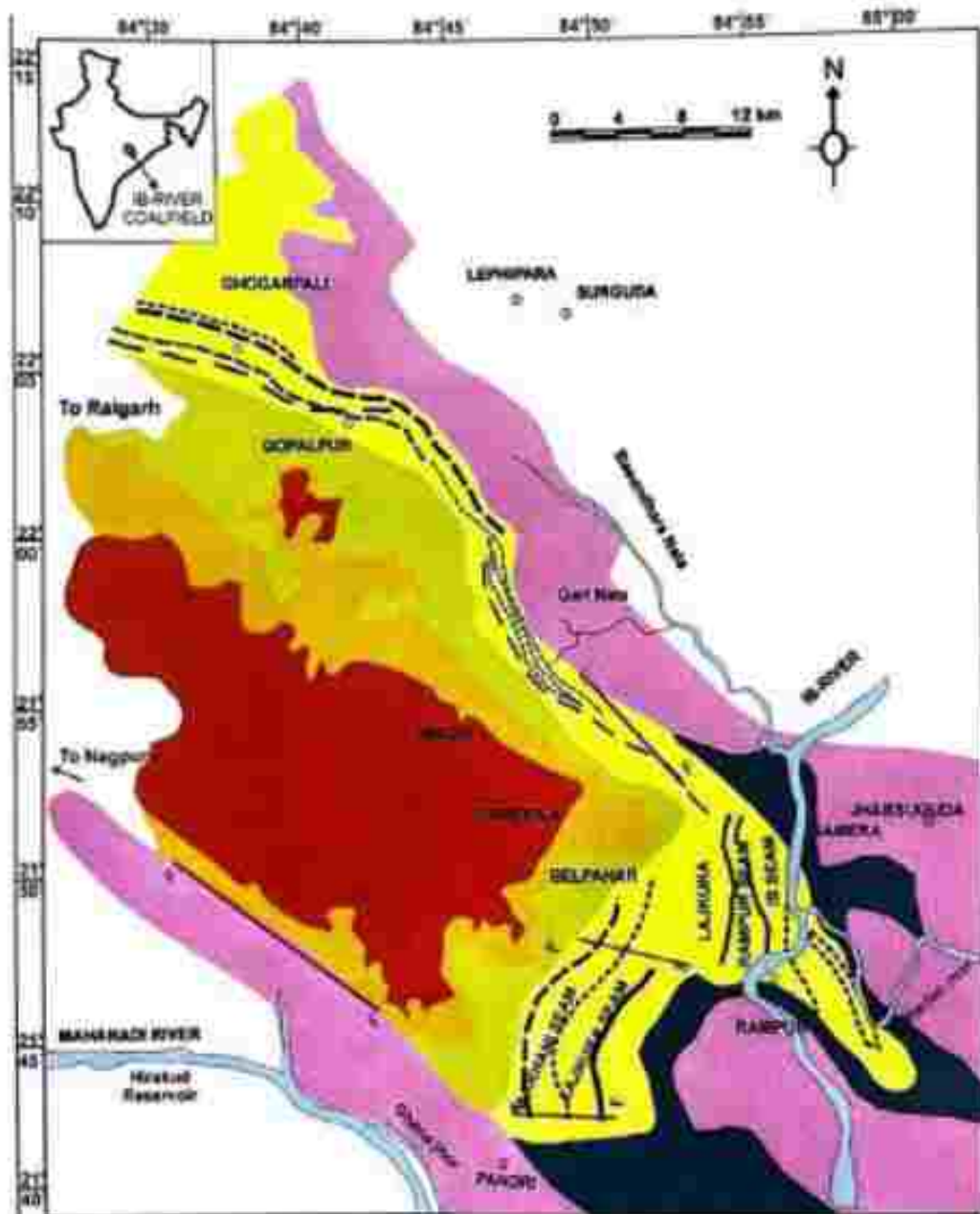
- Due to effect of Mining the river / nalla water is heavily polluted, over loaded with silts / dusts and remnants of heavy metals.
- Fish Fauna of Rivers / Jore are also affected even fish fauna found to contain heavy metals.
- Fish when taken by animals / human being may cause cancer cells.
- Entire food chain likely to be contaminated.
- Ground water is also found to be contaminated.
- Pumping out of water from mine pits (due to puncture of water table) affects to ground water table – Water drawing capacity of tube well reduced resulting defunct tube wells. It affects availability of drinking Water (Portable water in the locality)
- Availability of surface water (in village ponds / dug wells etc ), the duration of availability reduced causing hardship to man and animals.
- During extension of Kulda OCP, 134.69 ha forest land will be diverted out of which 83.24 ha is from Lalma RF (in total) and Rest 51.45 ha revenue forest & DLC Forest land.
- Lalma RF bears a mixed deciduous forest having bamboo. As the Basundhara Nala and the Catchment of Kunda MIP is flowing just near to the RF its diversion will affect the water flow in the nala, water holding capacity of the MIP etc.
- 30441 number of trees will be removed for mining activities,
- The impact on Fauna are Scaring of animals and departing from the area – impact of Noise / Vibration and Blasting.
- Disturbances in prey & Predator relation, Poor transmission of Animal communication resulting poor reproductive and genetically poor breed.
- Suffering from respiratory / digestive disorders in animals / birds etc.
- Reduced Avifauna concentration.
- Poor & inadequate water and fodder to animals.
- Attraction of light endangered live of wild animals.
- Crushing of snakes by speedy trucks / Lorries.
- Death of animals due to Road accidents and Fall of animals in quarry pits.
- Loss of Habitat may lead to reduction of Paraket population in the ZOI.
- One Site specific wildlife Conservation Plan has been approved vide Letter No 3958/CWLW-FDWC-FD-0127-2021 dated 07<sup>th</sup> May, 2022 for Siarmal Opencast Coal Mining Project.

- The approved project (WLCP) Cost is Rs 874.14 Lakh and Plan is valid for 10 years i.e. from 2022-23 to 2031-32
- Interventions to be implemented by User agency (MCL, Basundhara Area) are Institutional Plantation, Assisting Forest Staff for Forest Fire Control;
- Providing Vehicle with POL & Driver, Assisting VFC (Village Forest Committee), Providing Vehicles for Publicity & Livelihood improvement Purpose Public Awareness Camps;
- Creation & Maintenance of Water holes, Assistance to Similpal Tiger Foundation, Fixing Signage on Haul Roads / Interval Roads, Renovation of Village Ponds, Fixing Illumination light down ward, Deposit of additional 5% towards unforeseen interventions in Odisha Wildlife Account
- Cattle Immunization Program,
- Forest Department will implement activities like Improvement of Bamboo Forests through Plantations @400 plants per ha, Construction of Water holes on Dry Nala Bed, Fire line Creation and maintenance, Deployment of Fire Protection Squad
- Providing Modern Fire Fighting equipment Blower and POL, Conducting Mock fire fighting drills, Information Dissemination by Banya kantha;
- Incentive Rewards for Zero Forest Fire VSS / Villages, Deployment of Multipurpose Squad, Providing anti depredation equipment, Support to RRT ( Rapid Response Team) – Providing a Driver and POL Expenses,
- Providing Trap Camera (SIM Based) for Monitoring of animal movement, Improvement of Skill of Bamboo artisans, Quality Seed Collection & marketing (Forest Species), Deployment of Informers
- Public Awareness Camps:
- For animal Passage all along the Basundhara Nala (about 25 km) is to be developed an Animal Passage at a width of 2x100m + Basundhara Nala Width 75m to 100m Say about 300m.
- Ease approach from the embankment to water course, 6 Animal Drinking Points will be developed at an interval of 4-5 km depending upon animal concentration. (In addition to 20 bathing Ghats to be developed as per River Development Plan.)
- Approach will be of 1:6 gradients with Grass matting. Width of the path to Animal drinking points: 3-4m

- On both banks Ficus species and other fruit bearing species like Jamun, Mango and Sisoo will be planted @10 plants per RKM will be planted. All total 500 plants will be planted with three years maintenance.
- "Animal Drinking Points - No Disturbances / interference" signage's will be provided.
- This plan is valid for 5 years i.e. from 2024-25 to 2028-29.
- The Plan cost is projected at Rs 1115.120 Lakh (Rupees Eleven Crore Fifteen Lakh and Twelve Thousand Only)
- On approval & implementation of this Plan, it is expected to improve recharge of Ground Water and better Wildlife Management. Concentration of animals along the River Basundhara will increase. The water availability will increase and need of animals will be catered.



## CHAPTER-I LOCATION OF PROJECT & ITS AREA



## CHAPTER-I

### Location of Project & Its Area;

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#### 1.0 Introduction:

Mahanadi Coalfields Limited (MCL) is one of the major coal producing company of India. It is one of the eight subsidiaries of Coal India Limited. Mahanadi Coalfields Limited was carved out of South Eastern Coalfields Limited in 1992 with its headquarters at Burla, Sambalpur. It has its coal mines spread across Odisha. It has total seven open cast mines and three underground mines under its fold.

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). The move is a part of India's push to enhance coal production in order to meet the country's energy requirement.

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam. [NB: 8.52 ha forest land has been re-diverted from existing Kulda OCP to Basundhara Washery reducing the existing area by 8.52 ha (  $634.205\text{ha} - 8.52\text{ha} = 625.685\text{ha}$  )]

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of *Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980* vide Proposal no FP/OR/MIN/50293/2020

For enhancement of Production from existing capacity to 21.0 MTPA with an increase in area from 634.205 Ha to 921.305 ha "Terms of Reference" has been granted vide File No. J-11015 / 10/1995-IA-II (M) dated 13.12.2022 in reference to online Proposal No IA/OR/CMIN/401934 / 2022 dated 13<sup>th</sup> October, 2022. On the ToR Issued there is a reference to the Standard ToR vide condition no 5.

In the Standard TOR for Open cast Coal mining project Condition No (xvii) reads as follows.

*“(xvii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna should be given. If the study area has endangered flora and fauna or if the area occasionally visited or used as a habitat by Schedule-I Species, or if the project falls within 15km of an ecologically sensitive area, or used as a migratory corridor then a comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA / EMP Report and comments / observation from the CWLW of the State Govt. should also be obtained and furnished.*

As the project involves diversion of 134.69 ha forest land and the study area has Schedule-I Animals / Birds / Reptiles, this Site Specific Wildlife Conservation Plan is being prepared to comply the Standard ToR condition and conditions likely to be stipulated under forest diversion orders. (Copy of the ToR and Standard ToR are enclosed as Annexure-I & IA.)

### 1.1 Location of the Project:

The Kulda Opencast Project is situated in Ib Valley Coal fields at village Balinga, Tumulia, Siarmal, Kulda and Bankibahal under Hemgir Tahasil of district Sundargarh, Odisha. The Kulda coal block is bounded by Latitude: 22°01'02" N to 22°03'03"N; Longitude: 83°43'28" E to 83°45'35"E. (Latitude: 22°01'02"N to 22°03'03"N; Longitude: 83°43'28"E to 83°45'35"E) The coal block find place in Topo Sheet No F44L12 (64 N/12) and F44L16 (64 N/16) (Scale 1:50000). The location map is at Plate No-1

#### 1.1.1 Forest Administrative Jurisdiction:

The entire Project is in Gopalpur Forest range under Sundargarh Forest Division. Under civil jurisdiction, the coal block is coming under Hemgir Tahasil of Sundargarh district. The detail Forest / Civil Jurisdiction is furnished below.

Sl No	Forest Jurisdiction		Civil Jurisdiction	
	Beat	Tikilpara	Village	Balinga, Tumulia, Siarmal, Kulda and Bankibahal
2	Section	Gopalpur	Tahasil	Hemgir
3	Range	Gopalpur	Sub Division	Sundargarh
4	Division	Sundargarh	District	Sundargarh
5	Circle	Rourkela	Division	Sambalpur

### 1.1.2 Extent of Project Area & Land Schedule:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The pre mining land status is as follows.

Sl No	Category of Land	Existing in Ha	Proposed in ha	Total	Percentage
1	Agricultural / Pvt. Land	259.794	99.07	358.864	38.95
2	Waste Land	146.521	26.18	172.701	18.75
3	Forest Land	219.37	134.69	354.06	38.43
4	Grazing Land	0.00	28.68	28.68	3.11
5	Surface water body	0.00	7.00	7.00	0.76
	Total	625.685	295.620	921.305	100.00

Table 1 Pre Mining land status

Village wise forest, non- forest land is furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Bankibahal		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
5	Siarmal		68.55	68.55	1.21	27.22	28.43	96.98
6	Lamla RF	88.25	0	88.25	0	0	0	88.25
	Total	88.25	274.33	362.59	109.20	353.74	462.94	825.51
	Area outside the Lease	0	0	0	99.99	4.33	104.32	104.32
	Total	88.25	274.33	362.59	209.19	358.07	567.26	929.83
	Re-diverted Forest area			(-)8.52				(-) 8.52
	F. Total			354.07	209.19	358.07	567.26	921.305

Table 2 Village wise forest, non-forest land

### 1.1.3 Approach to the Project:

The project is approachable from District head quarters Sundargarh by Sundargarh- Raigarh Road which is about 40 km from the project. It is also approachable from Hemgir. The nearest rail Station is Kanika which is 36km away from the Mumbai – Howrah main Rail line. There is one coal corridor (rail line) from Jharsuguda- Gopalpur under South Eastern Railway. There is also Coal corridor (On Road) from Bankibahal- Bhedabahal which connects to Biju Express Way at Bhedabahal. Another Road Duduka to Kanika Rail siding also connects the project.

## 1.2 Cost of the Project:

The Cost of the Project is Rs 31925.00 Lakh. Form A (Part-I) of Forest Diversion proposal indicating cost of the project is at Annexure-II.

## 1.3 Nature & Land involved in the Project:

### 1.3.1 Nature of the Project:

The project is a non linear one.

### 1.3.2 Land Involved in the Expansion Project:

The land involved in the project has been indicated at Para 1.1.2. The MCL authority has applied for extension of mining activities from 634.205 ha to 921.305 ha i.e. additional 295.62 ha will be put to mining activities. The village wise area proposed for expansion is furnished below.

Sl No	Name of Village	Area under Forest in Ha	Area under Non Forest including Pvt. Land in Ha	Total in Ha	Percentage
1	Kulda	8.89	73.76	82.65	27.96
2	Bankibahal	5.14	32.09	37.23	12.59
3	Balinga	0	9.74	9.74	3.29
4	Tumulia	35.81	45.34	81.15	27.45
5	Siarmal	1.61	0	1.61	0.54
6	Lalima RF	83.24	0	83.24	28.16
	<b>Total</b>	<b>134.69</b>	<b>160.93</b>	<b>295.62</b>	<b>100.00</b>

Table 3 Land involved in expansion of the project

## 1.4 Stipulated Condition under which plan to be prepared:

For expansion of Kulda OCP, the MCL authority has applied for Environment Clearance for which ToR has been issued by MoEF&CC, New Delhi vide File No. J-11015 / 10/1995-IA-II (M) dated 13.12.2022 (Annexure- I & IA). In the Standard ToR under Condition no (xvii) there is provision for preparing the Site Specific wildlife conservation Plan & its approval from CWLW, Odisha. The condition reads as follows.

*“(xvii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna should be given. If the study area has*

*endangered flora and fauna or if the area occasionally visited or used as a habitat by Schedule-I Species, or if the project falls within 15km of an ecologically sensitive area, or used as a migratory corridor then a comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA / EMP Report and comments / observation from the CWLW of the State Govt. should also be obtained and furnished.*

Further the User Agency has applied for diversion of 134.69 ha of forest land for expansion of mining activities. The proposal is under consideration. In stage-I (in Principle Approval) there may be stipulated Condition to prepare SSWLCP and implement at project cost. In order to comply these conditions, this plan is being prepared and submitted for consideration.

## **1.5 Statutory Clearance:**

### **1.5.1 Status of Forest Clearance:**

The total forest area involved in Kulda OCP is 362.58 ha. Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F.No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. Copy of the Order is at Annexure-III. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and under consideration of various authority.

### **1.5.2 Status of Wildlife Clearance:**

The project area does not form part of National Park, Wildlife Sanctuary, any Protected Area nor it comes within any Eco Sensitive Zone of National Park, Wildlife Sanctuary, any Protected area. Hence Wildlife Clearance U/s 29 of Wildlife (Protection) Act, 1972 is not applicable to this project.

### **1.5.3 Status of Environmental Clearance:**

The MCL authority has obtained Environment Clearance for expansion of Kulda OCP from 19.6 MTPA to 21 MTPA in an ML area of 634.205 ha vide F. No J-11015/ 10/ 1995-IA-II (M) Dated 24<sup>th</sup> May, 2022. (Copy at Annexure-IV)



## CHAPTER-IV

### Impact Mitigation Measures

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#### 4.0 Introduction:

There are 2 ways to mine coal – Strip Mining and Underground Mining – both ways have their own impact to the environment and health. In the present project under discussion is an Opencast Mining which adopts strip mining.

The negative effects of coal mining cannot be disputed:

- **Destruction of Landscapes and Habitats:** Strip mining also known as surface mining, involves the stripping away of earth and rocks to reach the coal underneath. If a mountain happens to be standing in the way of a coal seam within, it will be blasted or leveled - effectively leaving a scarred landscape and disturbing ecosystems and wildlife habitat.  
The total area under excavation will be disturbed.
- **Deforestation and Erosion:** As part of the process of clearing the way for a coal mine, trees will be cut down after obtaining forest clearances. The total forest area involved in the project is 354.07 ha (362.59 -8.52), out of which 227.90 ha has already been utilized and user agency i.e. MCL has applied for forest clearance over 134.69ha. This includes 83.24 ha of Reserved Forest i.e., LalmaRF having moderate to dense mixed forest associated with Bamboo. The loosened topsoil can be washed down by rains and the sediments get into rivers, streams and waterways. Downstream, they will affect the fish and plant life and block river channels which cause flooding.
- **Contaminates Ground Water:** The minerals from the disturbed earth can seep into ground water and contaminate water ways with chemicals that are hazardous to our health. An example would be Acid Mine Drainage. Acidic water can flow out of abandoned coal mines. Mining has exposed rocks which contain the sulphur-bearing mineral, Pyrite. This mineral reacts to air and water to form sulphuric acid. When it rains, the diluted acid gets into rivers and streams and can even seep into underground sources of water.
- **Chemical, Air & Dust Pollution:** In the process of mining digging to the level of 200mRL is projected in the mining plan. The problem is that huge amounts of earth and rock are brought up from the bowels of the earth. These mining wastes can

become toxic when they are exposed to air and water. Examples of toxins are mercury, arsenic, fluorine and selenium. The amount of dust generated in mining operations can be carried to nearby towns by the wind. These dust particles can cause all kinds of health problems for humans who are exposed to it.

- **Methane in the Atmosphere:** Coal mine methane emissions from coal dumping yards are often released to air. Methane is less prevalent in the atmosphere as compared to carbon dioxide, but it is 20 times more powerful as a greenhouse gas.
- **Coal Fires:** Fires from coal stock piles is naturally occurring during summer. These fires release smoke into the atmosphere - smoke which contains carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), methane (CH<sub>4</sub>), nitrous oxide (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>) and other toxic greenhouse gases.
- **Health Hazards:** Coal dust inhalation can cause black lung disease. Miners and those who live in nearby towns are the most affected. Cardiopulmonary disease, hypertension, COPD, and kidney disease are found in higher-than-normal rates in people who live near coal mines. The same effect is quite extended to animal world also.
- **Displacement of Communities:** All of these negative effects force people to move to other places as their air and water gets polluted and expanding coal mines make use of more and more of their habitat.

With this back ground the adverse impact of the present project is analyzed below.

#### **4.1 Adverse impact due to fugitive dust generation [Coal dust]:**

Fugitive dust including coal dust is likely to be generated at drilling in overburden benches the dust concentration varies between 20–25 mg/m<sub>3</sub> and in coal benches it varies between 15 – 30 mg/m<sub>3</sub>. Thereafter haul road, drilling perhaps the next important source of fugitive dust. Loading and unloading of coal is also a major point source of fugitive dust generation.

The settling of dust on vegetation, roof top, standing vehicles indicates the quantum of PM<sub>10</sub> and PM<sub>2.5</sub> being airborne. The adverse impact can be summarized as below. Coal dust pollution, including residual dust, is known to contaminate the air, water, and soil resulting in an increased risk of heart and respiratory diseases such as asthma, pneumoconiosis and bronchitis, as well as cancer, leading to thousands of premature deaths annually. The effect on wildlife is same as it is for human. It goes unnoticed as the animals are not occasionally seen in the locality / minutely observed.

The Ambient Air Quality data for month of February, 2024 are furnished below.

Monitoring Station	For Balaram OCP					DGS	Distance from DGS
	SPM	PM 10	PM 2.5	SO <sub>2</sub>	NO <sub>x</sub>		
North of CHP, Telemal	194	92	40	17.60	16.31	Domestic, OCP, Transportation	About 500m
S-W of working face Chamakpur	152	74	27	10.24	13.33	Village Road	
W of Working Face Bileimunda	166	85	33	12.44	16.25	Village Road	About 500m
North of CHP, Telemal	198	93	39	12.92	11.80	Domestic, OCP, Transportation	
CPCB Norm	600	300		120	120		

Table 30 Ambient air quality data for February month

#### Mitigation Measures:

- i. Create more vegetation / tree cover outside the Forests and increase crop density of degraded forests through appropriate Silvicultural practices;
- ii. To take up institutional plantation in Schools / other available institutions and in village vacant lands within 15 km -20km belt.
- iii. Develop avenue plantations on Rural roads / Embankments,
- iv. Encourage Farm Forestry – Distribution of Fruit bearing species to increase “Tree Outside the Forest”

#### 4.2 Adverse effect due to Blasting, Vibration & Noise:

Blasting is associated with coal mining. Due to blasting noise & vibration are associated. Further noise is generated for running vehicles, Train movement, conveyor belt running crushing at coal handling plants etc. Heavy noise scare the animals, hamper communication between animals, reduced libido in animals, hampers in night resting of animals / birds, disturb movement of nocturnal birds / animals. Noise induces stress in all animals / human being etc. if animals / birds are exposed to high intensity noise, they may develop hearing deficiency. This leads to ease pray to predators and reduction of animal concentration ratio / balance.

As per Noise level monitoring data, the noise level at various locations are as follows (as per February, 2024 Report).

Date of Sampling	Station	Noise level Measurement in Leg dB (A)	
		Day	Night
14.02.2024	External CT Road	65.1	63.9
14.02.2024	North of CHP	53.7	44.4
21.02.2024	External CT Road	64.8	60.8
21.02.2024	North of CHP	53.4	43.4
CPCB Norm	Industrial	75	70
	Residential	55	45

Table 31 Noise level monitoring (data)

- i. Noise less / Reduced technology for Blasting to be adopted ,
- ii. A dense Safety Zone / Maintaining corridor along the Basundhara Nala
- iii. Good Maintenance of all transport vehicles and HEMM

#### 4.3 Effect on Water regime:

The following water body / river are available within the study area.

Sl.No	Nala	Direction	Distance from the Project
1	Ahera Jor	N to S	8
2	Ajbahal Jor	N to S	9
3	Baghanakha Jor	E to W	9
4	Barhajharia Nala	W to E	5
5	Basundhara Nadi	N to W	0.5
6	Bhaina Jor	N to W	1.5
7	Chhaten Jor	Western Side from Kunda	0.5
8	Garia Nala	N to S	3
9	Ichha Nadi	N to E	9.5
10	Kuchadega Nala	E to W	9
11	Kur Nala	N to S	9
12	Tangarmunda Jor	N to S	10
13	Tumikhoh Nala	North West to S	10
14	Kunda MIP	S-W	1.50
15	Chaturdhara nala		1.00

Table 32 Water body/rivers in ZOI

The surface water is being polluted due to

- Settlement of air borne dusts / Coal dust,
- Washouts from coal stacks / OB Dumps containing coal dusts / heavy metals and silting up the water body,

- Increase in water turbidity,
- Mine run off flowing down to the rivers / nalla ,

The effect can be summarized as

- (i) The river / nalla water is heavily polluted, over loaded with silts / dusts and remnants of heavy metals.
- (ii) Fish Fauna of Rivers / jore are also affected even fish fauna found to contain heavy metals.
- (iii) Fish when taken by animals / human being may cause cancer cells.
- (iv) Entire food chain likely to be contaminated.
- (v) Ground water is also found to be contaminated.
- (vi) Pumping out of water from mine pits (due to puncture of water table) affects to ground water table – Water drawing capacity of tube well reduced resulting defunct tube wells,
- (vii) Affect availability of drinking Water (Portable water in the locality)
- (viii) Availability of surface water (in village ponds / dug wells etc ) –Duration of availability reduced causing hardship to man and animals.

#### Mitigation Measures:

Steps to be taken for

- i. Conservation of surface water,
- ii. Improve water holding capacity of village ponds,
- iii. Creation of water body with Semi impervious floor in forests / villages.
- iv. Create water holes in forests / dry nalla beds etc

#### 4.4 Traffic Pressure & Impact:

The present production is at 21.0 MTPA. The Road side sale at present is about 6.0 MTPA and same level for Road side sale will be maintained. There will be no additional traffic load. The present traffic load is calculated below.

Parameters	Unit	Quantum
Total Production of Coal	MTPA	18.75
Road side sale	MTPA	6.00
Truck Load / Lorry Capacity	Ton	30
No of Trucks / Lorry required (Average)	No	200000

No of Days (for Transportation) per annum	Day	571
No of Loads per day	No	571
PCU per day	@6 PCU/ Truck	3426
No of Trucks / lorry per Hour	No	24
Empty Trucks on same extent	No	24

Table 33 Present traffic load data

**Impact:**

- The area became congested. Standing of trucks on National Highway / other roads causes heavy rush and loss of travel time.
- Noise / Horn from trucks cause irritation to all living beings Man & Animal;
- Crossing of road by Reptiles / Lizards became more and more difficult and road became death trap.

**Mitigative measures:**

- More and more coal may be transported by Rail / Conveyor belt. This aspect is highly required to be explored.
- Placing of Signage for awareness to drivers and allow minimum time to animals to cross the road on event of sighting of animals on Road and close to road carriage way.

**4.5 Biological Impact:**

During extension of Kulda OCP, 134.69 ha forest land will be diverted out of which 83.24 ha is from Lalma RF (in total) and Rest 51.45 ha revenue forest & DLC Forest land. Lalma RF bears a mixed deciduous forest having bamboo. As the Basundhara Nala and the Catchment of Kunda MIP is flowing just near to the RF its diversion will affect the water flow in the nala, water holding capacity of the MIP etc.

Trees on Forest / Non Forest has been enumerated and furnished in the forest diversion proposal. The category wise trees enumerated are furnished below.

Land Category	No of Trees enumerated	Percentage
Forest		
Reserved Forest	20912	68.7
Revenue Forest & DLC	2723	8.9
Non Forest Govt. Land	363	1.2
Private Land	6443	21.2
<b>Total</b>	<b>30441</b>	<b>100.0</b>



Table 34 Category wise trees enumerated

#### Mitigation Measures:

For diversion of Forest land, Compensatory Afforestation land has been identified in degraded forest land in Pandripani RF, Punjipahad RF, Sidharmunda RF and Panikholia RF in Sundargarh Division close to the Project also. This will compensate the biological loss after a few years.

Further nearby village forests declared u/s 30 of the Forest act, 1972 i.e. erstwhile Social Forestry Plantations will be improved through Village Forest Committee at the project cost.

#### 4.6 Effect of Strong Illumination (Light):

The mine will work in three shifts throughout the year. For working in night strong illuminated light will be used to facilitate working. It will have adverse impact on wildlife and aquatic animals / fish fauna. The adverse impact as feared is as follows.

- The nocturnal birds will lose their navigational ability in dark,
- Snakes / Deer and other animals may be attracted from a distance and may lose their life.
- There may be accidental death of animals / reptiles on haul roads / internal roads,
- Fish those remain stand still on sight of light will be ease pray to predators in night. Catching of fish during night may cause loss of bio diversity.

#### Mitigation Measures:

All Mine lighting will be kept down ward so as "No light falls towards Forest"

#### 4.7 Impact on Flora:

Due to mining operation the effect on flora can be summarized as follows.

- Loss of trees mainly Sal and its associates of a Moist Sal Forest and loss of Biodiversity.
- Loss of Riparian Flora due to Diversion / straightening of Chhatenjore Nala:
- Ground water depletion may affect composition of Plant community and may face induction of dry species replacing moist one in nearby forest blocks;

#### Mitigation Measures:

It is proposed to maintain a corridor of 100-200m wide along the Basundhara Nala. Gap planting along the nala will help in restoration of Riparian vegetation.

#### 4.8 Impact on Fauna:

The impact on Fauna is briefly described as below,

- ❖ Scaring of animals and departing from the area – impact of Noise / Vibration and Blasting.
- ❖ Disturbances in prey & Predator relation.
- ❖ Poor transmission of Animal communication resulting poor reproductive and genetically poor breed.
- ❖ Suffering from respiratory / digestive disorders in animals / birds etc.
- ❖ Reduced Avifauna concentration.
- ❖ Poor & inadequate water and fodder to animals.
- ❖ Attraction of light endangered live of wild animals.
- ❖ Crushing of snakes by speedy trucks / Lorries.
- ❖ Death of animals due to Road accidents.
- ❖ Fall of animals in quarry pits.
- ❖ Loss of Habitat may lead to reduction of Paraket population in the ZOI.

#### Mitigation measures:

- (i) Quarry pits / Forest interface to be fenced either solar fencing or barbed wire fencing to avoid animal fall,

- (ii) All mining lighting arrangements are to be focus inward and reflection / light towards forest to be completely checked.
- (iii) Road signage indicating probable movement / presence of animals to be fixed for knowledge of Drivers.
- (iv) All efforts to reduce noise originating from HEMM, Lorries etc ,
- (v) Enhance water facility within Forest Blocks i.e. Garjanpahad, Dhanubansha, Chhenga Pahada RF and Balijhori RF.
- (vi) To maintain water holes within and outside the lease area;
- (vii) Awareness camps to be organized to motivate people,

#### **4.9 Socio- Economic Impact:**

##### **a) Employment generation:**

There will be regular employment to a tune of 325 numbers and temporary employment to a tune of 485 Person- days per year. Besides this there will be indirect employment to a tune of 500- 600 families being engaged in house hold business, transportation sector etc.

##### **b) Displacement of Habitation / Family:**

Due to expansion process, five villages will be displaced i.e. Kulda, Bankibahal, Balinga, Tumulia and Siarmal. Total number of families likely to be affected is 975. These Project Affected Family will be rehabilitated /compensated as per Resettlement & Rehabilitation Policy, 2013 of the State Government.

##### **c) Generation of more electric power and enhancement of Industrial Facility:**

The coal excavated will mostly used for Power generation in thermal power plants in South India and in the state as per Basket Linkage. Higher production of Coal will ensure constant power generation. It will help in industrialization & ensure economic growth of the society/ Country;

#### **4.10 Activities being implemented & Result:**

The user agency has taken up ameliorating activities in various sectors. The brief accounts of such activities are furnished below.

- i) Tree Planting within ML area:
- ii) Fixing of Solar lights in villages;
- iii) Public Awareness camps conducted:

- iv) Renovation of Village Ponds
- v) Fixing of artificial nest in forests / habitation to develop alternate habitat

Details of Tree planting undertaken:

No.	Name of the Mine	PLANTATION DONE	
		Financial Year	Total Area (Ha)
1	Kulda	19-20	3.45
2		20-21	7.17
3		21-22	2.37
4		22-23	10.00
5		23-24	28.82
Total In Last 5 Years			51.81

Table 35 Details of tree planting undertaken

#### Result:

The activities being taken up in wildlife matters as described above has responded in a positive manner. In order to enhance public relation and on conservation of avifauna steps will be taken to create alternate birds' habitat by fixing earthen nests for Sparrows conservation and conducting awareness camps by engaging NGO's working on nature conservation and awareness campaign.

#### 4.11 Implementation of SSWLCP by MCL (Basundhara Area):

One Site specific wildlife Conservation Plan has been approved vide Letter No 3958/CWLW-FDWC-FD-0127-2021 dated 07<sup>th</sup> May, 2022 for Siarmal Opencast Coal Mining Project. (Annexure - VII). The approved project (WLCPP) Cost is Rs 874.14 Lakh and Plan is valid for 10 years i.e. from 2022-23 to 2031-32

#### 4.12 Directives by MoEF&CC, IA Division in ToR as related to Wildlife Conservation:

The following directives are stipulated in the Terms of Reference dated 13.12.2022.

- i) PP shall maintain at least 100m of safe distance from the river with latitude and longitude after every 100m from one location to another and accordingly approved Mining Plan should be submitted;

- ii) In pit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding. No transportation of coal by trucks / dumpers shall be proposed in EIA / EMP.

#### **4.13 Interventions to be implemented by User agency (MCL, Basundhara Area):**

##### **i. Institutional Plantation:**

In order to enhance tree cover outside the forest (TOF), every year 5 schools (preferably eco club schools)/ hospitals / Govt. institutions etc will be selected and tree planting with adequate protection and maintenance for 5 years will be taken up. During the plan period 25 institutions will be taken up for this.

##### **ii. Assisting Forest Staff for Forest Fire Control:**

During summer, fire in Coal stacks, Forest floor is very prevalent. User agency will take all preventive and fire control measures within the Mining lease area. No fire should jump / extend to forests from Mining lease area. Further for controlling forest fire, the MCL authority will provide 5 persons from January to June every year i.e. 6 months per year for combating forest fire. The wages of the persons engaged will be reimbursed by User Agency on requisition by Range Officer, Gopalpur / DFO, Sundargarh.

##### **iii. Providing Vehicle with POL & Driver:**

In order to provide mobility to forest staffs during Man- Animal Conflict, Fire controlling activities etc, one Vehicle will be provided to Range Officer, Gopalpur. The vehicle woll be Purchase and Pledged in favour of Forest Department. It will be provided as per the demand of the DFO, Sundargarh.

##### **iv. Assisting VFC (Village Forest Committee):**

Social Forestry Project village woodlots have been declared as Village Forest u/s 30 of the Odisha Forest act, 1972. It is proposed to assist Village Forest Committee (VFC) to improve village forest by planting of Fruit Bearing species like Bela, Jamun, Jack fruit and Palm trees (Seeds Dibbling). The development plan will be prepared by the VFC with help of the Forest Staff / Partner NGO posted to the Range and to be financed by the User Agency. During Plan period 5 Village forests approximately over an area of 30 ha will be developed). The concerned VFC will be activated and improvement will be done in due consultation with them. The tentative villoges proposed are

List of Village Forests to be Improved (Sundargarh Division)			
Sl No	Village Forest name	Area in ha	Remark
<b>Lepheripada Range</b>			
1	Ratansara (Ratanpur)	4.00	
<b>Ujalpur Range</b>			
2	Bandhapali (in 3 patch)	32.22	In 3 patches of 11.22 ha, 6.0 ha & 15.0 ha
3	Kulabira	11.00	
4	Lemlema	5.636	
5	Lephipada (Manbholapada)	9.00	In 2 patches (5.00ha & 4.00 ha)
	<b>Total</b>	<b>61.856</b>	

Table 36 List of Village Forest for Treatment

For activation of VFC @ Rs1.00 Lakh per VFC = Rs5.00 lakh;

Development of Village forests over 30 ha @Rs4.00 lakh per ha = Rs120.00 lakh

Detail planting scheme will be prepared by the VFC in consultation with the Forest Range Officer, VFC Secretary.

**v. Providing Vehicles for Publicity & Livelihood Improvement Purpose:**

Providing one force traveler 3350 super 12 Sitter vehicle to Badhunjharria VSS of Sarafgarh Nature camp to augment their livelihood activities through Tourism ( through purchase & Pledged) (with driver & POL) @ Rs 19.43Lakh or say Rs20.00 Lakh. In order to provide a boost to the tourism in Sundargarh while improving livelihood through tourism allied activities by organizing circuit tourism & mining tourism activities, to the visitors of Sarafgarh nature camp, a traveler vehicle will be provided through purchase by the User Agency & handed over to the VSS.

**vi. Public Awareness Camps:**

Public Awareness camps will be conducted with the help of Forest staffs / Organizations associated with Forest, Wildlife & Nature. 4 camps per year will be conducted on forest & environment theme like World Forest Day, World Sparrows Day, Earth Day, World Environment day, Wildlife Conservation day, Vana Mahostava, Wildlife Week, Ozone Day etc,

**vii. Creation & Maintenance of Water holes:**

The ML area is 921.305 ha i.e. 9.21 Sq. Km. During summer day temperature rises to 45°C and above. Due to absence of water source within ML area, the animals / birds, domestic animals are facing hardship. The user agency will create water holes (saucer type with 10m Dia and 1m depth with a gentle slope). The inner surface will be impervious to retain water for a longer period. Water will be provided to the water holes twice in a week or as frequently as required depending upon periodical rainfall / day temperature etc. In case of fall of dry leaves during wind it should be cleared immediately. At least 20 water holes are to be maintained within ML area. This may be implemented under supervision of Forest staffs / Organizations working for nature conservation.

**viii. Assistance to Similpal Tiger Foundation:**

There is movement of Tigers / Leopards from Chhattisgarh to Sundargarh and move upto interiors of Bonal Division and Jharkhand Singhbhum Elephant Reserve. Mining in this belt is going to continue at least for half a century.

Hence there is a need to have study on long term impact of the mining project / activities on movements of elephants / Tigers / Leopards / Panthers etc. For this Rs2.50 crore is to be contributed to Similpal Tiger Foundation by the user agency. It will help in mitigating man-elephant conflict and will help in designing long term / prospective plan for elephant conservation in the landscape where this project has short term and long term impact.

**ix. Fixing Signage on Haul Roads / Interval Roads:**

The coal is being transported to Railway siding at Kanika, Silo at Barpali etc. There are habitations with domestic animals / Wild animals, Signage on Road crossing of animals / precautionary measures to be taken by Drivers etc especially in night will be fixed. Thirty (30) signages will be provided on transport routes.

**x. Renovation of Village Ponds:**

In order to enhance water holding capacity of surface water body i.e. village tanks / ponds, de-siltation of village ponds within / outside the ML area will be taken up in a planned & regular manners. (2 numbers village pond will be de-silted every year)

**xi. Fixing illumination light down ward:**

All mining lighting arrangements are to be focus inward and reflection / light towards forest to be completely checked.

**xii. Cattle Immunization Program:**

To organize Cattle Immunization Program to check contaminated diseases to spread to Tiger Landscape. Every year 4 villages with two doses (June & December) will be organized in consultation with Forest range Officer and Local veterinary officer.

**xiii. Developing Corridor along Basundhara Nala:**

There is a Proposal to construct embankment on both sides of Basundhara nala to check flash flood hazards. There are also directives to keep a corridor 100m on both sides. It is proposed to maintain animal corridors along the Basundhara nala so as to maintain continuity of habitat from Garjanpahar RF / Dhanubansh RF to Punjipahad RF/ Kalatpani RF etc. – Details discussed under Animal Passage Plan. Interventions to be implemented by User agency are

- a) Planting of Ficus Species, Jamun, Mango and Sisoo along the embankment corridor which will act as animal corridor. About 25 km length will be covered. 25kmx2x 10 trees per km= 600 plants with 3 years maintenance. Any Damage trees / plants noticed within 3 years will be replanted at project cost,
- b) The embankment height will be around 3m above HFL. There are provisions for stone packing on river side embankment to protect the bank from erosion. The User agency will ensure ease approach from embankment to Water course of Basundhara nala. Ease approach from embankment to Water course of Basundhara nala. 6(Six) approaches at an interval of 4-5 km will be provided with 1: 6 gradient with grass turfing. Width 3-4m Passage to Animal drinking water point.
- c) Providing No disturbances signage near to Passage to Animal drinking water point
- d) River bed Pond – 6 numbers by Sand bag- every year

**4.14 Abstract of works to be implemented by User agency (MCL):**

Sl No	Description	Quantum
1	Institutional Plantation:	every year 5 schools (preferably eco club schools)/ hospitals / Govt. institutions
2	Assisting Forest Staff for Forest Fire Control	Provide 5 persons from January to June every year i.e. 6 months per year for combating forest fire.
3	Providing Vehicle with POL & Driver:	Purchase & Pledged in favour of Forest Department for Gopalpur Range
4	Assisting VFC (Village Forest Committee)	5 Village – Develop 30 ha VF

5	Providing Vehicles for Publicity & Livelihood Improvement Purpose	Providing one force traveller 3350 super 12 Sitter vehicle to Badhunjaria VSS of Sarafgarh Nature camp to augment their livelihood activities
5	Public Awareness Camps:	4 camps per year on World Forest Day, World Sparrows Day, Earth Day, World Environment day, Wildlife Conservation day, Vana Mahostava, Wildlife Week, Ozone Day
6	Creation & Maintenance of Water holes Within ML area	20 water holes
7 ✓	Assistance to Similpal Tiger Foundation	Rs2.50 Crores
8	Fixing Signage on Haul Roads / Interval Roads	30 no
9	Renovation of Village Ponds	2 numbers village pond will be de-silted every year
10	Fixing illumination light down ward (mining Light)	
11	Cattle Immunization Program	Every year 4 villages with two doses (June & December)
12	Developing Corridor along Basundhara Nala	<ul style="list-style-type: none"> <li>✓ Planting of Ficus Species, Jamun, Mango and Sisoo along the embankment corridor i.e. animal corridor. About 25 km length will be covered. 25kmx2x 10 trees per km= 500 plants with 3 years maintenance.</li> <li>✓ Ease approach from embankment to Water course of Basundhara nala. 6(Six) approaches at an interval of 4-5 km will be provided with 1: 6 gradient with grass turfing. Width 3-4m Passage to Animal drinking water point.</li> <li>✓ Providing No disturbances signage near to Passage to Animal drinking water point</li> <li>✓ Construction of 6 numbers of River bed Ponds- Every year.</li> </ul>
13 ✓	Additional 5% Funds towards unforeseen interventions:	5% of the Plan cost over and above by the User agency in "The Wildlife Society of Odisha" for taking up operations not envisaged in the Site Specific Wildlife Management Plan i.e. Rs55.75 Lakh

Table 17 Abstract of works to be implemented by U/A (MCL)

Approved



## CHAPTER-V

### Animal Passage Plan

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#### 5 Introduction:

Ib-valley coalfield is located between latitudes 21°31' & 22°14'N and longitudes 83°32' & 84°10'E within the districts of Sundergarh, Jharsuguda and Sambalpur of Orissa state and covers an area of about 1460 Sq. Kms. The coalfield is named after the river Ib, a tributary of river Mahanadi, which passes through the eastern fringe of the coalfield. The Ib Valley coalfield forms a half elliptical basin. It is closed towards southeast and open towards north-west. The basin has normal contact with the metamorphics in the north-western, northern, north-eastern, eastern and southeastern part. It has a faulted contact with the metamorphics in the south-western boundary where younger formations viz. Raniganj and Barren Measure occur in juxtaposition with the metamorphic. The coalfield is contiguous to Mand-Raigarh coalfield of Chhatisgarh. The boundary between Mand-Raigarh and Ib Valley coalfield is administrative boundary of Orissa and Chhatisgarh states.

Geological blocks like Basundhara, Kulda, Garjanbahal, Chaturdhara, Manoharpur, Meenaskhi, Siarmal and Siarmal extension have been explored in detail and geological reports have been formulated. In Rampia geological block, scout drilling has been done to ascertain occurrence of coal and economic viability. Jamkani geological blocks has also been explored by MECL. Now detailed exploration in dip side of Kulda/ Garjanbahal and Prajapada block (dip side of Siarmal and Siarmal west extn. block) is under progress by CMPDI. Similarly, Madhupur block is under exploration by DG (O).

#### 5.1 Elephant Movement:

In Sundargarh Division, there is no Wildlife Sanctuary, National Park and Protected Area. However presence of Elephant and occasional presence of Tiger / Leopard is being reported. In the preliminary Working Plan Report the wildlife Scenario has been described as below.

There is no Wildlife Sanctuary, National Park, Protected Area and Elephant Corridor in the Division. The neighboring states to Sundargarh Division are Jharkhand and Chhattisgarh in the North. The Singhbhum West Elephant Reserve is on the border in Jharkhand State. Similarly Gomarda Wildlife Sanctuary of Raigarh District is also near to the Division.

Elephant movement from Chhattisgarh to Hingir (Garjanpagad RF) Range and moving towards Jharsuguda- Belpahar Range – Brajrajnagar Range is observed. The elephant movement across the Ib valley Coal Deposit Zone near to Hemgir Range- Kanika- Belpahar is also occasionally observed. Their movement near to Kulda – Siarmal - Gopalpur is not noticed.

### 5.2 Animal Passage.

Most of the dense forests of Sundargarh Division lie in South-Western side of the Kulda OCP / Basundhara OCP. Similarly Jamkani RF is in North- Western side of the Kulda Coal Block. As IB Coal deposits bisects the forest blocks in a

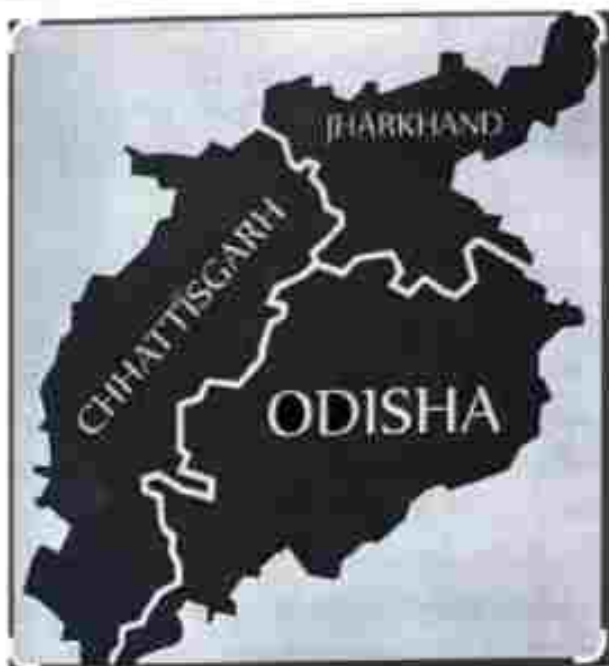
wider strip of 15-20 km and in some places 25 km, movement of animal across the coal block is becoming difficult and all coal blocks virtually fragmented the Wildlife habitat. To maintain the genetically superior breed, continuity of animal movement from South-East to North West is highly required. Keeping all these factors the MoEF & CC in ToR Condition no 4 (vii) issued directives as follows.

**(Vii) PP shall maintain at least 100m of safe distance from River with latitude and longitude after every 100m from one location to another and accordingly approved Mining Plan should be submitted.**

There will be a passage all along the Basundhara Nala at a width of 2x100m + width of the Nalla which is about 75m to 100m from origin to tail end i.e till it joins with River IB.

### 5.3 Development Plan for Basundhara Nala:

Due to flash flood, both banks of Basundhara Nala are inundated during Rainy season and pose threat to Opencast Mining of Kulda OCP, Siarmal OCP and other mines close to Nala bank. MCL has River development Plan under which there will be embankment all along the Basundhara Nala as designed below.



For Left embankment:					
From	To	Distance in km	Embankment Height in m	Top width in m	Bottom width
Chatudhara Nala		4.535	3	5	14
Chattajore Nala		6.014	3	5	14
Basundhara River RD	20.865	3.500	4	5	17
17.365 km					
20.865 km	24.50	3.635	4	5	17
24.50	31.05	6.550	5	5	20
Total length		24.234			
For Right Embankment					
Chatudhara Nala	4.535		3	5	14
Chattajore Nala	6.014		3	5	14
Basundhara River RD	20.865	3.500	3	5	14
17.365 km					
20.865 km	24.50	3.635	3	5	14
24.50	31.05	6.550	3	5	14
Total		24.234			

Table 46 River development plan

The slope of the Bank is 1:1.5. The slope towards country side (opposite to River side) the embankment will be turfed with Doob Grass and towards River side with Stone packing / geo mattress to protect against bank erosion. There will be 20 numbers of bathing ghats within this 24.234 km.

For animals approaching the nala for water purpose may use these bathing ghats when it is not used by human. For animals, it is proposed to have 6 Animal drinking points or drinking Ghats. It will be at an average interval of 4-5 Km depending upon animal concentration.

Design of Animal drinking points: Slope at least 1:6 or more, Width 3-4m, if the surface is of Stone packed, it is to be covered with Grass matting.

Besides Water holes proposed at Para No 4.13.1 (iii), it is proposed to create River bed ponds near to Animal Drinking Points. It will be created annually using Sand bags. Six Numbers of River

bed ponds will be annually constructed during end of Monsoon i.e. 1<sup>st</sup> week of October. Height of Sand bags Minimum 1.25 m so that water to a level of 1m can be easily maintained.



#### **5.4 Development of Animal Corridor:**

In order to improve the vegetation density / cover and resting place for animals / birds It is proposed to Plant Ficus Species, Jamun, Mango and Sisoo along the embankment corridor i.e. animal corridor. About 25 km length will be covered.  $25\text{km} \times 2 \times 10$  trees per km = 500 plants with 3 years maintenance. The map of Animal corridor (proposed for development) is given below.



### 5.5 Summary of Passage Plan:

- a) All along the Basundhara Nala (about 25 km) is to be developed an Animal Passage at a width of  $2 \times 100\text{m} + \text{Basundhara Nala Width } 75\text{m to } 100\text{m}$  Say about 300m.
- b) Ease approach from the embankment to water course, 6 Animal Drinking Points will be developed at an interval of 4-5 km depending upon animal concentration. (In addition to 20 bathing Ghats to be developed as per River Development Plan.)
- c) Approach will be of 1:6 gradients with Grass matting. Width of the path to Animal drinking points: 3-4m
- d) On both banks Ficus species and other fruit bearing species like Jamun, Mango and Sisoo will be planted @10 plants per RKM will be planted. All total 500 plants will be planted with three years maintenance.
- e) "Animal Drinking Points - No Disturbances / interference" signage's will be provided.



*Prase*  
 DIVISIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION

*[Signature]*  
 STAFF OFFICER (Envt. & Forest)  
 BASUNDHARA AREA

*[Signature]*  
 Project Officer  
 Kulda Opencast Project  
 परियोजना अधिकारी  
 कुल्दा खुलासा प्रकल्प

### 6.3 Abstract of Interventions (Sundargarh Division)

Sl No	Description	Unit	Rate	Quantum	Amount in lakh Rs	Remark
<b>A</b>	<b>Habitat Improvement</b>					
1	Improvement of Bamboo Forests through Plantations @400 plants per ha (including raising of bamboo saplings)	Ha	1,90,716.80	100	190.717	Giripahad RF- 25ha, Hunderkhol RF- 25ha and Chengapahad RF-50 ha
2	Construction of Water holes on Dry Nala Bed:	No	0.75 L	3 per nala x7 nala x5 =105 no	78.75	@3 water hole per Nala Size 5m x 5m to 7.5m x 7.5m; Barhajharian Nala, Basundhara Nadi, Bhaina Jor, Kuchadega Nala, Kur Nala, Tangarmunda Jor and Ajbahal Jor
<b>B</b>	<b>Integrated Fire Management:</b>					
3	Fire line Creation & Maintenance:					
a	Creation	Km	15 MD	322	21.74	1 <sup>st</sup> Year Creation Dhanubansh RF-70 km, Garjan Pahad RF-252 Km @450/- Per day
b	Maintenance	Km	10 MD	322 x4	57.96	2 <sup>nd</sup> Yr to 5 <sup>th</sup> Yr Dhanubansh RF-70 km, Garjan Pahad RF-252 Km @450/- Per day
4	Deployment of Fire Protection Squad	Unit	32.75L	02	65.50	@ 5 people with vehicle, POL etc (For Gopalpur Range / Himgir Range)
5 a	Providing Modern Fire Fighting equipments: (Blower)	No	65,000/-	10	6.50	
b	Provisions for POL for Blowers;	Annual	10000/- per Blower per Yr	10*5	5.00	
6	Conducting Mock fire fighting drills:	No	60,000/-	2x5	6.00	one camp at Gopalpur Range and one camp at Himgir Range.

7	Information Dissemination by Banya kantha;	Annual	1.00L	5	5.00	Message on Forest Fire / Wildlife etc in light of "Swasthya Kantha"												
8	Incentive Rewards for Zero Forest Fire VSS / Villages;	LS			50.00	<table border="1"> <thead> <tr> <th>Criteria</th> <th>Reward</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>"Zero Forest Fire" For a Year</td> <td>Rs.5000/-</td> <td>To be decided by the DFO &amp; Range Officer at the end of the season.</td> </tr> <tr> <td>"Zero Forest Fire" For consecutive 2 years</td> <td>Rs.125000/-</td> <td></td> </tr> <tr> <td>"Zero Forest Fire" For consecutive 4 years</td> <td>Rs.300000/-</td> <td></td> </tr> </tbody> </table>	Criteria	Reward	Remark	"Zero Forest Fire" For a Year	Rs.5000/-	To be decided by the DFO & Range Officer at the end of the season.	"Zero Forest Fire" For consecutive 2 years	Rs.125000/-		"Zero Forest Fire" For consecutive 4 years	Rs.300000/-	
Criteria	Reward	Remark																
"Zero Forest Fire" For a Year	Rs.5000/-	To be decided by the DFO & Range Officer at the end of the season.																
"Zero Forest Fire" For consecutive 2 years	Rs.125000/-																	
"Zero Forest Fire" For consecutive 4 years	Rs.300000/-																	
<b>C Protection &amp; Surveillance:</b>																		
9	Deployment of Multipurpose Squad	Unit	136.30	02	272.60	@10 person with Vehicle / POL etc, Gopalpur range / Hingir Range Protection Camp												
10	Providing anti depredation equipments;	Annual	1.00L	5	5.00	Search Light, Infrared camera, Nets, Ladder, other rescue equipments												
11	Providing Trap cameras (SIM based)	No	35000/-	100	35.00	For Monitoring of Wildlife Movement.												
12(a)	Driver for RRT Vehicle (Rapid Response Team)	Annual	25000/-	60 Months	15.00	To strengthen the RRT system by providing one Driver and additional POL to facilitate RRT round the clock.												
12(b)	POL for RRT vehicle (Rapid Response Team)	Monthly	20000/-	60 Months	12.00													
13	Portable DG set	Nos		7No	50.00	6nos for 6 Ranges & 1no for Division office (Rs 6.25 L *6=Rs.37.50 L for Range Office, Rs 12.50 L for Division Office) NB: Price interchangeable.												
<b>D Providing Livelihood Support (forest based)</b>																		
14	Improvement of Skill of Bamboo artisans;	LS			25.00	Upgrade skill and develop to create "articles of modern fashion / design". Steps to set up "Urban Hat												

15	Quality Seed Collection & marketing (Forest Species):	LS			10.00	of Bamboo articles" with publicity. ❖ Training for identification of quality Plus trees of different species including field demonstration; ❖ Grading of seeds including purchase of equipments, ❖ Storage & marketing. ❖ Administratively assisting in marketing through Silviculturist, Various divisional supply.
E	Peoples Participation:					
16	Deployment of Informers:	Mont hly	2500/-	5x60	7.50	For collection of intelligence related to Wildlife Crimes
17	Public Awareness Camps:	No	50000/-	4x5	10.00	@2 camps per Year in Gopalpur Range and Himgir Range.
	<b>Total</b>				<b>929.267</b>	
	Add, 20% towards cost escalation				<b>185.853</b>	
	<b>G. Total</b>				<b>1115.120</b>	

Table 49 Abstract of Intervention (Sundargarh Division)

(Rupees Eleven Crore Fifteen Lakh and Twelve Thousand Only)



STAFF OFFICER (Evyt. & Forest)  
BABUKHARA AREA

 Project Officer  
Kulda Opencast Project  
ଅନୁଷ୍ଠାନ ଅଧିକାରୀ  
କୂଳା ଓପେନକାସ୍ଟ ପ୍ରକଳ୍ପ

  
D. J. J. J.

### 6.5 Plan Period:

This plan is valid for 5 years i.e. from **2024-25 to 2028-29.**

### 6.6 Monitoring & Evaluation:

The implementation of this plan may be periodically monitored by a committee headed by the Regional Chief Conservation of Forests, Rourkela Circle. The Divisional Forest Officer, Sundargarh Division and representative of MCL may be invited to the review meeting.

### 6.7 Interim Review & Revision of the Plan:

The Plan period is for five years and will be revisited by the DFO, Sundargarh at least one year before expiry of its implementation. The user agency will bear the cost of such plan on its approval. Further the user agency will bear additional cost, if any towards enhancement of wage rate and escalation of price of materials at the time of implementation of this plan. In case of any deviation, it will be dealt as per law for violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Environment (Protection) Act, 1986 and Wildlife (Protection) Act, 1972.

### 6.8 Projected Plan Cost:

The Plan cost is projected at **Rs 1115.120 Lakh (Rupees Eleven Crore Fifteen Lakh and Twelve Thousand Only)**

Sl. No	Agency	Amount in lakh Rs
1	User Agency	Works enumerated. No financial projection.
2	Forest Department	
a)	Sundargarh Division	1115.120
<b>Total</b>		<b>1115.120</b>

**Table 52 Total Projected Plan Cost (WLCP)**

### 6.9 Executing Agency:

The proposed interventions under Para 6.1 will be implanted by User agency at the project cost.

The interventions suggested under Para 6.2 and 6.3 will be implemented by the Divisional Forest Officer, SundargarhDivision.

  
**STAFF OFFICER (Envt. & Forest)**  
**BARUNGHARA AREA**

  
**Project Officer**  
**Kulda Opencast Project**  
**ଓଡ଼ିଶା ସରକାର**  
**କୂଳା ପ୍ରକଳ୍ପ**

Approved  
  
**19/09/24**  
**Principal Chief Conservator of Forests**  
**(Wildlife) & Chief Wildlife Warden**  
**Odisha, Bhubaneswar**

  
**Divisional Forest Officer**  
**SUNDARGARH FOREST DIVISION**

**6.10 Conclusion:**

On approval & implementation of this Plan, it is expected to improve recharge of Ground Water and better Wildlife Management. Concentration of animals along the River Basundhara will increase. The water availability will increase and need of animals will be catered.





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

Phone No-06622-272243, E-Mail- [dfo.sundargarh@odisha.gov.in](mailto:dfo.sundargarh@odisha.gov.in)



377

No. 3436 DQY/06/2025

To

**The Project Officer, Kulda OCP,  
Basundhara Area of NCL,**

Sub: - Proposal towards seeking clearance from Ministry of Environment, Forest & Climate Change, Govt. of India for diversion of 134.69 ha of forest land for Kulda Expansion Open Cast Project of Basundhara Area of Mahanadi Coalfields Limited.  
-Demand for deposit of SSWLC Plan fund.

Ref: - Memo No.8180 dt.19.07.2024 of PCCF (WL) & Chief Wildlife Warden, Odisha.

Sir,

With reference to the letter cited above, it is to inform you that, the Chief Conservator of Forests (WL-II) O/o the Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Odisha has conveyed the Site-Specific Wildlife Conservation Plans at a total financial outlay of **Rs.1115.120 Lakhs** (Rupees Eleven Crore Fifteen Lakh- Twelve Thoudsand) as per activities mentioned in Chapter-VI of the SSWLC Plan, in compliance to the condition stipulated by State Govt. of the Environmental Clearance granted by MoEF & CC, New Delhi vide Letter No.7679/FE & CC dt.25.04.2024. Further, as per direction by the Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Odisha, the User Agency shall deposit 5% of the plan cost of the approved SSWLC Plan in the A/c. of the Society "The Wildlife Odisha" maintained in PCCF (WL) Office towards unforeseen interventions.

Therefore, you are requested to deposit an amount of **Rs.1115.120 Lakhs** (Rupees Eleven Crore Fifteen Lakh- Twelve Thoudsand) in the State CAMPA fund by using Parivesh Portal (<https://parivesh.nic.in>) for the purpose of implementation of various activities within the project impact area under Sundargarh Forest Division. Further, you are requested to deposit 5% of the plan cost of the approved SSWLC Plan in the A/c. of the Society "The Wildlife Odisha" maintained in PCCF (WL) Office towards unforeseen interventions. The evidence of deposited amount may be furnished to the undersigned for further needful action at this end.

Yours faithfully,

  
Divisional Forest Officer,  
Sundargarh Forest Division

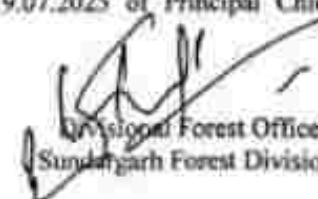
Memo No. 3437/4F (Misc)/2025 Dated: 24 /06/2025

Copy forwarded to the Principal Chief Conservator of Forests, (Wildlife) & Chief Wildlife Warden, Odisha for favour of kind information and necessary action with reference to his Memo No.8181 dt.19.07.2024.

  
Divisional Forest Officer,  
Sundargarh Forest Division

Memo No. 3438/4F (Misc)/2025 Dated: 24 /06/2025

Copy forwarded to the Regional Chief Conservator of Forests, Rourkela Circle, Rourkela for kind information and necessary action with reference to Memo No. 8181 dt. 19.07.2025 of Principal Chief Conservator of Forests, (Wildlife) & Chief Wildlife Warden, Odisha.

  
Divisional Forest Officer,  
Sundargarh Forest Division

370

20/7/24  
20/7



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

Government of Odisha, Forest, Environment & Climate Change Department  
PRAKRUTI BHAWAN, PLOT NO.1459, SAHEED NAGAR, BHUBANESWAR- 751007  
Phone: 0674-2602250, Website: www.wildlife.odisha.gov.in, Email: odishawildlife@gmail.com

No. 8190 / CWLW-FDWC-FD-0033-2024  
Dated, Bhubaneswar the 19 July, 2024

To

The Chief Manager (Mines)  
O/o. the Project Officer, Kulda OCP,  
Basundhara Area, MCL, Sundargarh,  
Odisha- 770076



Sub: Diversion of 134.69 ha of forest land for expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanandi Coalfields Limited in Sundargarh District under Sundargarh Forest Division – Approval of SSWLCP.

Sir,

I am directed to convey the approval of PCCF (WL) & CWLW, Odisha for the Site Specific Wildlife Conservation Plan at financial outlay of ₹1115.120 Lakh (Rupees Eleven Crore Fifteen Lakh Twelve Thousand) only as per the details of activities mentioned in Chapter-VI of the Plan in compliance to the condition stipulated by State Govt. while recommending the Forest Diversion Proposal to MoEF&CC, New Delhi vide Letter No. 7679/FE&CC dated 25.04.2024. A sum of ₹1115.120 Lakh (Rupees Eleven Crore Fifteen Lakh Twelve Thousand) only may be deposited in State CAMPA fund through portal (<https://parivesh.nic.in>) for the purpose of implementation of various activities within the project impact area in Sundargarh Forest Division.

2. Activities in the project area as per Chapter-IV of the Plan will be executed by the project proponent under the guidance of the concerned DFO with an additional stipulation i.e, User Agency has to pay ₹2.50 Crore for assistance to Similipal Tiger Foundation. Further, the User Agency shall deposit 5% of the plan cost over and above in the A/c. of "The Wildlife Odisha" maintained in this office towards unforeseen interventions.

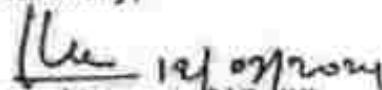
3. The Plan period is five years and will be revisited by concerned DFO at least one year before expiry of its implementation. The User Agency will bear the cost of such Plan on its approval. Further, the User Agency will bear additional cost, if any, towards enhancement of wage rate and escalation of price of materials at the time of implementation of this Plan.

P.T.O.

In case of any deviation, it will be dealt as per law for violations of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Environment (Protection) Act 1986 and Wildlife (Protection) Act 1972.

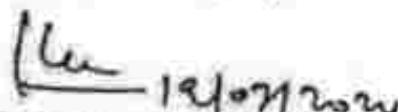
Yours faithfully,

Encl: Copy of approved SSWLCP.

  
Chief Conservator of Forests (WL-III)

Memo. No. 8181 /dt. 19/07/2024  
Copy forwarded for information and necessary action to the: -

1. OSD-cum-Special Secretary to Government of Odisha, FE&CC Department, Bhubaneswar with reference to that Deptt. Memo No.7680/ FE&CC dated 25.04.2024.
2. PCCF (FD & NO, FC Act), O/o PCCF & HoFF, Odisha, Bhubaneswar with reference to Memo No.2852 dt. 05.07.2024 of RCCF, Rourkela Circle.
3. Regional Chief Conservator of Forests, Rourkela Circle along with copy of the approved SSWLCP with reference to his office Memo No.2851 dt.05.07.2024.
4. Divisional Forest Officer, Sundargarh Division alongwith copy of the approved SSWLCP with reference to Memo.No.2853 dt.05.07.2024 of RCCF, Rourkela Circle.
5. Deputy Conservator of Forests (Administration), O/o. the PCCF(WL) & CWLW, Odisha.

  
Chief Conservator of Forests (WL-III)





Project Name : Expansion of Kuda Open Cast Coal Stock Yards at Numbakere, District of Channarayana, Karnataka  
 Total Land Area : 1000000 Sq. Mts  
 Project Type : - Other -  
 Area of Divested Land : 1000000 Sq. Mts

Please refer the number/Range of the Divested Land

Serial No. of Divested Land : 1  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 2  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 3  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 4  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 5  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 6  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 7  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 8  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 9  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

Area of Divested Land : 1000000 Sq. Mts

Serial No. of Divested Land : 10  
 Name of Divested Land : 1000000 Sq. Mts  
 Date of Divested Land : 10/10/2010

*Handwritten signature*  
 Project Officer  
 Kuda Open Cast Project  
 Government of Karnataka



Home | CA 100 Projects | Districts | Districts | Reports

Land Acquisition in progress (CA 100) - CA 100 Projects

Project Name:

Project Type:

Category of CA Work:

Search Criteria:

Search Range:

The Name/Component/Block Details:

Stage of Land Acquired for CA:

Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

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Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

Project Name:

Area of Land Acquired for CA in Hectares:

Project Name:

Sl. No.	Project Name	Category of CA Work	Stage of Land Acquired for CA	Area of Land Acquired for CA in Hectares	Project Name	Category of CA Work	Stage of Land Acquired for CA	Area of Land Acquired for CA in Hectares
1	Apprenticeship - Fulbrighter for Under Graduate Range of Bangalore District	CA	Deposited notified Project	17.000	Apprenticeship - Fulbrighter for Under Graduate Range of Bangalore District	CA	Deposited notified Project	17.000
2	Maintenance of Part - 1 (Maintenance of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Maintenance of Part - 1 (Maintenance of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
3	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
4	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
5	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
6	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
7	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
8	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000
9	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000	Construction of Part - 1 (Construction of Part - 1) under Computer Range of Bangalore District	CA	Deposited notified Project	16.000

12/12/2025  
Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना



## Scheme

For mitigative measures to minimize soil erosion and choking of stream in the Mining lease area of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

---

Compliance to Condition No 9(a) of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



## Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project of Mahanadi Coalfield Limited, Basundhara Area District: Sundargarh, Odisha.

---

### 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022.

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293/2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No-9 reads as follows.

9. Following activities as per approved plan / Schemes, shall be undertaken in the lease area by the user agency under supervision of the state forest Department.

- a. Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance with the approved plan in consultation with the State Forest department.
- b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with approved scheme.



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

- c. Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;
- d. Stabilize the overburden dumps by appropriate grading / benching, in accordance with the approved scheme, so as to ensure that angle of repose at any given place is less than 28°

This scheme is prepared to comply the condition no 9(a) of the in- principle approval orders as stated above. .

## 2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land In Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda Total		77.56	77.56	26.87	50.59	77.46	155.02
2	Basundhara		87.44	87.44	12.06	78.52	90.58	178.02
3	Basundhara Re-diverted area		4.97	4.97	36.73	110.80	147.53	152.5
4	Lumibest		35.81	35.81	32.33	86.61	118.94	154.75
5	Stotal		68.55	68.55	1.21	0	28.43	96.98
	Lamla RF	88.25	0	88.25	109.20	353.74	462.94	88.25
		88.25	274.33	362.58	99.99	4.33	104.32	825.51
		0	0	0	209.19	358.07	567.26	104.32
		88.25	274.33	362.58				929.83
				(-)8.52				(-) 8.52
				354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F.No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in- principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	Infrastructure including Safety Zone and Embankment External dump	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	Total	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Redirected Washery for	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5		(-)8.52	0	(-)8.52				
	Total	219.375	406.315	625.69	134.69	160.93	295.62	921.305

3. Drainage pattern: The mine is located in the Ib River catchment area. There is one tributary of Ib River i.e.

Basundhara Nallah flowing just on the North – North East direction. There is also a Nallah namely Chattajore Nallah flowing within the ML area. The straightening of Nallah has been done for Chattajhor nallah to flow outside the lease area. It is being feed by rivulets and general runoff of the area. The location map of Basundhara Nallah and straightened Nallah is depicted below.

### 3.1 Prominent Physiographic features,

The topography of the block is rugged with steep rise and fall. The central and southern part lie at a comparatively higher elevation. Altitude of the block is 254m to 320m. The ground slopes towards North and North-East.

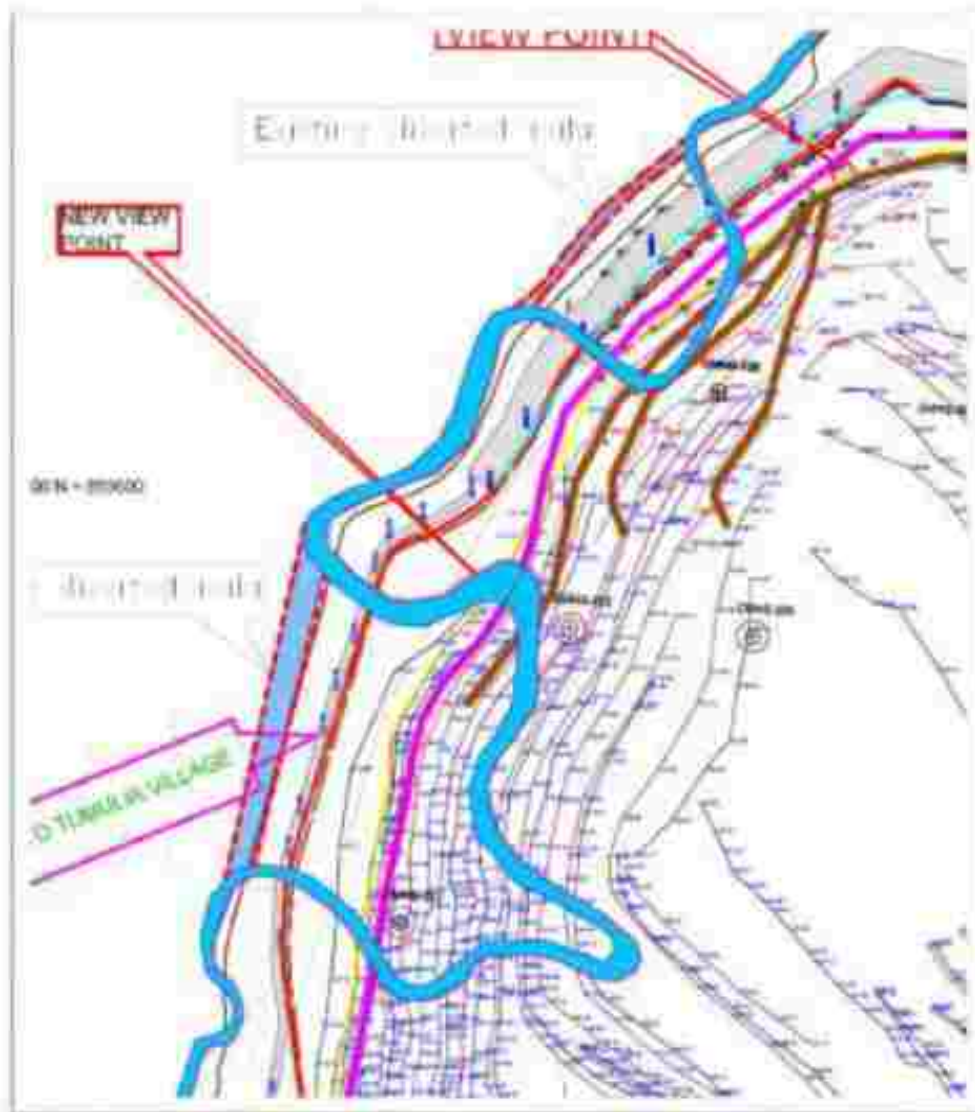


Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.





Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.



3.2 Rain fall pattern: The Hemgir area of Sundargarh district, like the rest of the district, experiences a sub-tropical climate with a distinct rainy season. The monsoon season, primarily influenced by the southwest monsoon, brings the majority of the rainfall, with July and August being the wettest months. The average annual rainfall for Sundargarh is around 1467.2 millimeters.



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.



Most of the rainfall is during July to September. The rain fall during the other months mostly does not end in surface runoff.

#### 4. Land use plan & source of soil erosion:

Out of 921.305 ha of mining lease area, the quarry area is 539.985 ha external dump 178.932ha. Safety Zone is about 14.97 ha @7.50 m all along the boundary (Boundary length is 19954m. There is proposal for construction of an embankment along the Basundhara Nallah with the following parameters.

For Left embankment:					
From	To	Distance in km	Embankment Height in m	Top width in m	Bottom width
Chatudhara Nallah		4.535	3	5	14
Chattajore Nallah		6.014	3	5	14
Basundhara River RD	20.865	3.500	4	5	17
17.365 km					
20.865 km	24.50	3.635	4	5	17
24.50	31.05	6.550	5	5	20
Total length		24.234			
For Right Embankment					
Chatudhara Nallah	4.535		3	5	14



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

Chattajore Nallah	6.014		3	5	14
Basundhara River RD	20.865	3.500	3	5	14
17.365 km					
20.865 km	24.50	3.635	3	5	14
24.50 Total	31.05	6.550	3	5	14
		24.234			

S/No	Land Use	Percentage	58.07
1 2 3	Quarry Excavation area	839.983	22.68 178.932
4 5	Infrastructure including Safety Zone and Embankment	19.24	
	External dump		
	Total	929.83	100.00
	Redirected for Washery	(-) 8.52	
	Total	921.305	

Out of the total precipitation received in a year, about 58.61% is within the excavated area which is latter pumped out after due settling of the rain water. It has no contribution towards runoff and soil erosion.

The external dump which contributes towards 19.42% of the precipitation and appears as most of the runoff is mostly responsible for soil erosion from dump surface and find its way to the nearby Water course i.e. Chattajore Nallah and Basundhara Nallah.

The coal store yard is another place, where rain water carries the coal dusts and flows down to the Nallah and natural water system. This also contributes to choking of Nallah.

#### 5. Overburden generation and stabilization / handling:

In the current approved mining plan, the OB Generation and process of stacking / stabilization has been dealt in the following manner.

##### 5.1 Coal & Overburden Production Schedule:

Coal & Overburden Production Schedule				
Year		Coal in Mt	OB (Mcum)	SR (Cum/ T)
Yr-1	2022-23	21.0	23.52	1.12



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

Yr-2	2023-24	21.0	23.73	1.13
Yr-3	2024-25	21.0	23.73	1.13
Yr-4	2025-26	21.0	23.73	1.13
Yr-5	2026-27	21.0	24.15	1.15
Yr-6	2027-28	21.0	24.15	1.15
Yr-7	2028-29	21.0	24.15	1.15
Yr-8	2029-30	21.0	24.15	1.15
Yr-9	2030-31	21.0	24.15	1.12
Yr-10	2031-32	21.0	23.52	0.47
Yr-11	2032-33	8.627	4.026	1.11
	Total	218.627	243.006	

The over burden including top soil is used for internal backfilling and construction of embankment along the Basundhara Nallah. The quantum of OB and top soil used / proposed to be used is furnished below.

All figures are cumulative and in MM3									
Year	OB Removal (expected)			External dump Internal dump				Embankment	
	Top Soil	OB	Total	Top Soil	OB	Top Soil	OB	Top Soil	OB
Base year (31.03.2022)	0.83	86.05	86.88	0.27	38.06	0.09	47.33	0.0	1.11
Y-1 22-23	0.9	109.5	110.4	0.32	44.04	0.18	62.08	0	1.11
Y-3 24-25	1.05	156.81	157.86	0.42	58.73	0.36	95.8	0	1.11
Y-5 26-27	1.19	204.55	205.74	0.52	72.48	0.54	131.63		1.11
Y-11 32-33	1.62	328.27	329.89	0.52	72.48	1.1	254.68		1.11

### 5.2 Existing Dumping Pattern:

External Dump-1: Situated on immediate rise side of adjoining Garjanbahal Block. About 38.33 MCum has already been dumped as on 31.03.2022

External Dump -2. It is in the Dip side of Kulda block. Its capacity is about 31.94 MCum. The year wise OB dump likely to be stored / dumped till 31.03.2025 is 19.89 Mcum

Construction of Embankment: For Construction of Embankment along Chattenjhor nalla and Basundhara Nallah, 1.11 MCum has already been dumped.



### 5.3 Steps being adopted for reducing soil erosion:

1. Back filling with the OB has already started. The quantum of OB used for back filling has no contribution to soil erosion and hence no roll in choking of nalla, natural water course.

#### 2. Designing for OB

Bench Height (Max)	10 m (for 5.5 cum EHS)
Bench Height (Max)	15m ( for 10cumETS)
Working Bench width	37m / 50m
Bench Slope	700

3. Drains has been provided at toe with proper gradient,

4. Adequate safety distance on surface from dump toe has been maintained to avoid any accident due to slope failure.

5. To level the dumps and grade them outward properly to obviate water accumulation.

6. Garland drain is made & maintained around OB Dump area to avoid water flow during monsoon below the OB Dump.

7. An open drain of appropriate size is provided on all terraces at the foot of next bench to receive the storm water from upper benches. This is then discharged to the lower benched through masonry chute.

8. Grass carpeting / Plantation over the external OB Dump.

### 6. Measures proposed for checking Soil Erosion & Choking of Natural Water Course:

In order to de-silt the running water / runoff it is proposed to take the following measures.

a) Provide Garland drain around the OB Dump-1 and 2, Coal stock yard;

b) Provide grass strip of 1.5m width on the upper side of the Garland drain,

c) Planting of Vetiver (*Chrysopogon zizanioides*/ *Vetiveria zizanioides*) in two rows by grass slips / seeds.

d) Provide Siltation tanks to Garland drain discharge- Six Numbers

#### 6.1 Provide Garland drain around the OB Dump-1 and 2, Coal stock yard;

Considering the quantum of rainfall in peak hours, Garland drain of 1.75 m wide and 1m depth will be provide all along the OB Dump No-1, OB Dump No -2 and coal stock yard.



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

The length of the catch drain / Garland drain and volume of earth work required is furnished in the following table.

Dump Identity	Length of periphery in m	Size of Catch drain	Volume of the Earth work involved.
OB Dump No-01 & 02	3783	$(1.75+1)/2$	5202
Coal heap / Stack yard 1,3,4	1684	$(1.75+1)/2$	2316
Coal heap / Stack yard 2	665	$(1.75+1)/2$	914
Total	6132		8432

The drain will be excavated mechanically. The same will be annually maintained to make it effective.

6.2 Provide grass strip of 1.5m width on the upper side of the Garland drain,

The Garland / Catch Drain will be provided keeping a free distance from the dump so as to avoid choking of drain by failure of dumps etc. The free space available will be planted with two rows of Vetiver (*Chrysopogon zizanioides* / *Vetiver zizanioides*) grass from grass slopes. The catch drain Side / bottom will be seeded with Doob Grass seeds which will provide a mild obstruction to running water and reduce velocity. This will help settling of charged particles in the runoff. The total area for Vetiver grass slip is  $6132\text{m} \times 1.5\text{m} = 9198$  sq. m

Surface area  $\{2 \times 1 \times (2)^{0.5}\} \times 6132 + 6123 = 23465$  sq.m

Bottom of the catch drain area =  $6123\text{m} \times 1\text{m} = 6123$  sq. m



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.





6.3 Siltation Tanks: The Garland drain discharge water will be made to pass through series of Siltation tanks

at a suitable interval preferable within 1.00 km to 1.500 km depending upon availability of space / area for excavating siltation tanks. The minimum size 5mx5mx 2.5m depth. Total 6 siltation tank will be constructed & maintained . These siltation tanks are aimed at further slowing down the velocity nearing to stand still situation and allowing settling of silts.

The siltation tanks will be maintained / removal of silt in periodical intervals @10% of the cost per Annum.



Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kuldri CCP & Extension project

#### 6.4 Cost estimation:

Sl No	Work description	Rate in Rs	Quantum	Amount in Rs	Remark
1	Providing Garland Drain around the O8 Dump-1 and 2, Coal stock yard;	227.67 / cum	8432 cum	1919713.00	Size $(1.75m + 1m)/2$ ; side slope 45°
2	Annual maintenance	@5% per annum	10 yrs	959857.00	50% of the original requirement as in Item No 1.
3	Provide grass strip of 1.5m width on the upper side of the Garland drain	150/- per Sq. M	9198 sq. m	1379700.00	
4	Seeding of Doub Grass	35/-	23465 sq. m	821275.00	Doub Grass seed cost @Rs10/- per Sq.m + labour cost per Sq.m Rs25/-
5	Digging of Siltation tank (size: 5mx5mx 2.5m depth)	227.67 / cum	375 cum	85376.00	5*5*2.5*6= 375 cum
6	Annual maintenance / de-silting of Siltation Tank	@10% per annum	10 yrs	85376.00	
	Total			5251297.00	
	Add 20% for cost escalation due to labour rate enhancement			1050259.00	
	<b>G. Total</b>			<b>6301556.00</b>	
<b>Rupees Sixty Three Lakh One Thousand And Five Hundred Fifty Six Only</b>					

Technically Approved

  
Regional Chief Conservator of Forests  
Rourkela Circle



Scheme for mitigative measures to minimize soil erosion and choking of streams within the Mining Lease area of Kolda OCP & Extension project

### 7.0 Executing agency:

The Scheme will be implemented by the user agency on consultation with and under the supervision of the DFO, Sundargarh Division / State Forest Department as required under the Forest Division approval orders within 3 years from issue of final approval (stage-II orders) at project cost.

Encl: Surface Plan Map & Analysis of rate.

  
25/9/2025

General Manager,



Basundhara Area, MCL

Sundargarh

Project Officer  
Kolda Open cast Project  
परिचालन अधिकारी  
कुल्दा खनिज क्षेत्र

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

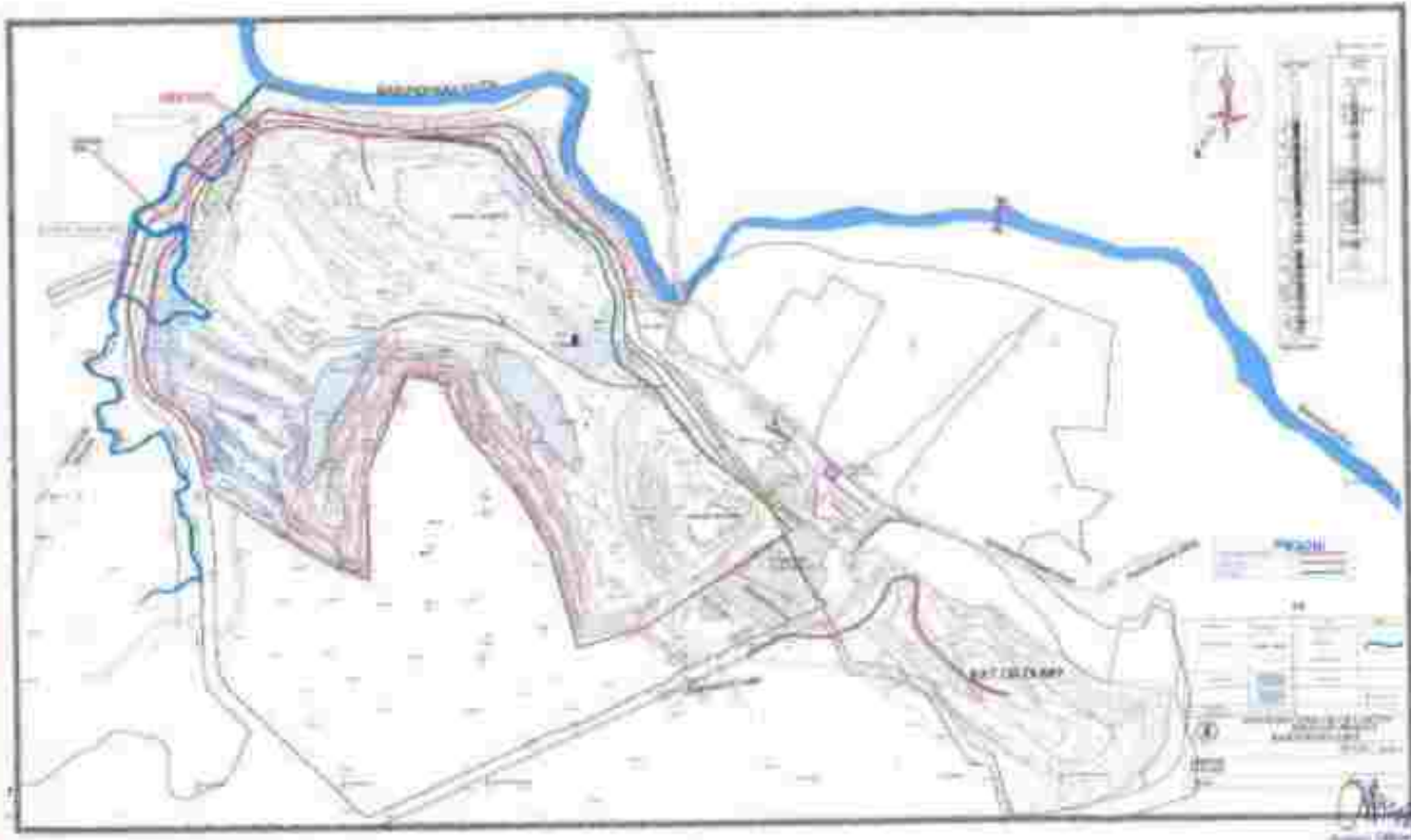


Scheme for mitigative measures to minimize soil erosion and choking of stream within the Mining Lease area of Kulda OCP & Extension project.

Analysis of rate for Earth work as per PWD rate Odisha wage rate @  
Rs462/- Per day

Sl No	Description of Work	MD Required	Amount @Rs462/-
1	Earth work in slushy soil (in Man water upto 0.6m depth requiring the aid of pans and vessels) within 50m. Initial lead and 1.5m initial lift as per the direction and specification of the Department.	Mulia 21 No	9702/-
		Woman Mulia 23 no	10626/-
		S. Total	20328.00
2	Overhead Charges 10%		2032.80
3	Sundries 2% Total Rate for 100 cum	Rate per	406.56
	cum		22767.36
			22767.36
			Rs227.67





*[Handwritten Signature]*  
Project Engineer  
Water Resources Department  
[Date]



## Scheme

For Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

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Compliance to Condition No 9(b) of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

## Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project of Mahanadi Coalfield Limited, Basundhara Area District: Sundargarh, Odisha.

### 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293 /2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 9 reads as follows.

9. Following activities as per approved plan / Schemes, shall be undertaken in the lease area by the user agency under supervision of the state forest Department.

a. Mitigative measures to minimize soil erosion and chocking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance with the approved plan in consultation with the State Forest department.

b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with approved scheme.

c. Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

d. Stabilize the overburden dumps by appropriate grading / benching, in accordance with the approved scheme, so as to ensure that angle of repose at any given place is less than 2:1

This scheme is prepared to comply the condition no 9(b) of the in- principle approval orders as stated above.

## 2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda Total		77.56	77.56	26.87	50.59	77.46	155.02
2	Basundhara		87.44	87.44	12.06	78.52	90.58	178.02
3	Basundhara Re-diverted area		4.97	4.97	36.73	110.80	147.53	152.5
	Lumbaria		35.81	35.81	32.33	86.61	118.94	154.75
	Stantial		68.55	68.55	1.21	27.22	28.43	96.98
	Lamia RF	88.25	0	88.25	109.20	353.74	462.94	88.25
		88.25	274.33	362.58	99.99	4.33	104.32	825.51
		0	0	0	209.19	358.07	567.26	104.32
		88.25	274.33	362.58				929.83
				(-)8.52				(-) 8.52
				354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F. No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in- principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest		Total	Forest	Non Forest	Total	
1	Quarry Excavation area	134.755 187.16		321.915	110.92	107.15	218.07	539.985
2	Infrastructure including Safety and Zone Embankment External dump	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	Total	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Redirected Washery for	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5		(-)8.52	0	(-)8.52				
	Total	219.375	406.315	625.69	134.69	160.93	295.62	921.305

3. Objectives: The scheme is aimed at reducing soil erosion and improving excavated soil stability within the ML area. The difficult terrain will be stabilized by seed sowing and comparatively plan area by tree planting.

#### 4. Drainage pattern:

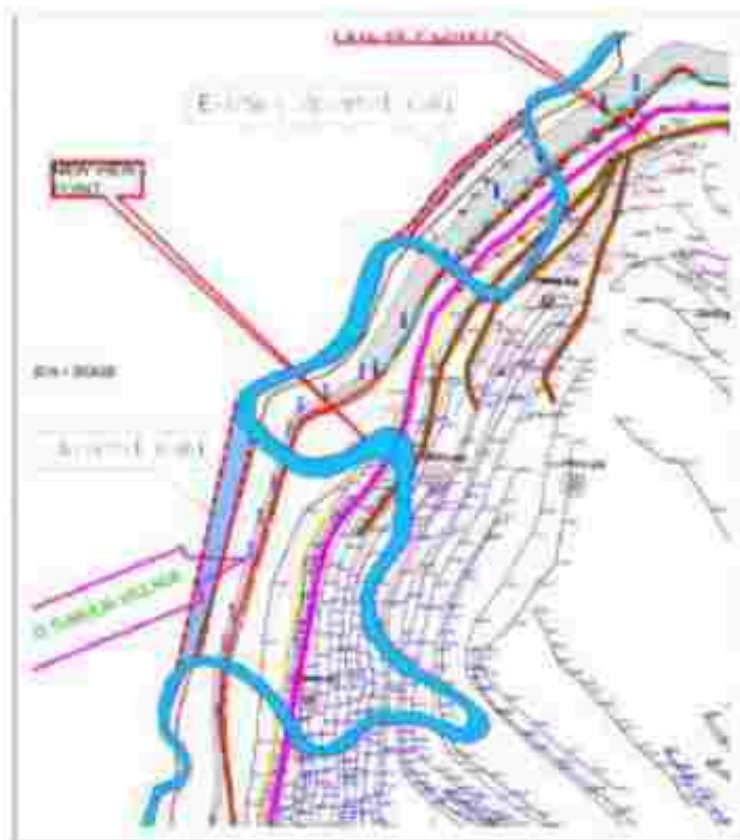
The mine is located in the Ib River catchment area. There is one tributary of Ib River i.e. Basundhara nala flowing just on the North – North East direction. There is also a nala namely Chattajore Nala flowing within the ML area. This nala within the ML area has been diverted with due permission from the competent authority. Basundhara Nalla and River Ib is being feed by rivulets and general runoff of the area. The location map of Basundhara nala and Chattajore Nala with diversion part is depicted below.

#### 4.1 Prominent Physiographic features,

The topography of the block is rugged with steep rise and fall. The central and southern part lie at a comparatively higher elevation. Altitude of the block is 254m to 320m. The ground slopes towards North and North-East.



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project.





Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

#### 5. Source of Soil erosion in the Mining Lease area:

On examination of land use plan (as in Approved Mining Plan), it is observed that 178.932 ha land will be under external dump. (At present the area under OB Dump is 60.52 ha and after expansion the additional area under OB Dump will be 18.43ha.)



The Dump surface is steep and devoid of soil nutrient, organic carbon etc. it is difficult to climb and plant on the dump surface. This dump surface will be stabilized and soil erosion will be checked through sowing of seeds (Broadcasting methods).

#### 6. Stabilization process suggested:

The Stage-I orders sowing of seeds has been greatly stressed for very difficult areas like dump surface which is tough and difficult to plant seedlings / saplings. Accordingly sowing of seeds on difficult areas / un-stabilized slopes is recommended. The preferred seeds are those will easily germinate and act as soil binder. The following seed mixture is recommended to be broadcasted / dibbled on exposed surface with loose / un-stabilized surface. Every year 500 kg of seed mixture will be dibbled / broadcasted as it will be



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

convenient. It will be executed for consecutive five years and result will be evaluated. If required it will be further continued.

Sl No	Species	Quantity in Kg / year
1	Doob Grass	50.00
2	Stylosanthes / Vetiver/ Crotalaria	50 .00
3	Simal ( Bombax Ceiba)	100.00
4	Acacia auriculiformis ( Acacia	100.00
5	Neem	50.00
6	Khair	100.00
7	Ailanthus excelsa	50.00
	<b>Total</b>	<b>500.00</b>

#### 7. Planting of Drought Hardy Species:

##### 7 (a) Availability of area:

In the approved Mining Plan, the progressive land reclamation has been provided. The year wise reclamation projected is furnished below.

Stage / Year	Land degraded (Ha)	Technically reclaimed area (in ha)				Percentage of Reclamation	
		Back Filling	Dump	Others	Total		
Up to base Year	531.753	172.55	88.96	20.00	281.51	52.9	
Y-1	2022-23	597.683	193.55	106.96	25.00	325.51	54.5
Y-3	2024-25	704.243	235.55	124.096	30.00	408.51	58.0
Y-5	2026-27	785.475	277.55	178.932	40.00	496.482	63.2
Y-11	2032-33	921.305	393.94	178.932	60.72	633.592	68.8
Post Closer							
Y-14	2035-36	921.305	539.98	178.932	202.393	921.305	100

From the above projected reclamation schedule 2025-26 to 2026-27 about (496.482-408.51) 87.972ha will be reclaimed by back filling of mine voids (mined out area). In between 2026-27 to 2032-33 another area of 137.11 ha (633.592-496.482) will be reclaimed gradually as per advancement of mining.

The area likely to be available for tree planting is projected as follows.



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

Year	Area likely to be reclaimed (in Ha)	Year wise Area projected (in Ha)
2025-26	87.972	43.50
2026-27		44.472
2027-28	137.11	22.85
2028-29		22.85
2029-30		22.85
2030-31		22.85
2031-32		22.85
2032-33		22.86
Total area		225.082

The proposed reclamation area i.e. from 2025-26 to 2029-30 i.e. 156.522 ha will be planted from 2026-27 to 2030-31.

Considering the nature of overburden, poor nutrient contain and moisture stress due to poor water holding capacity, following species will be planted.

Sl No	Name of species	Local name
1 2 3	Ziziphus mauritiana	Barakoli
4 5 6	Azadirachta indica	Neem Bela
7 8	Aegle marmelos	Kaintha
	Limonia acidissima	Mahala
	Ailanthus excelsa	Sirisha
	Albizia lebbeck	Simili
	Bombax Ciba	Sunari
	Casia fistula	



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project





Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project



The plant density of 1600 plants per ha (i.e. Spacing of 2.5mx2.5m) will be adopted. Seedlings of 18 month old will be preferred & planted.

The approved cost norm of the Forest department for 1600 plants with vegetative fencing will be adopted. (Office Order No 292/12F (Affn)41/2025 dated 12.03.2025.) The approved cost norm @Rs462/- wage rate is Rs 4,05,931.20 or say Rs 4,05,931/- . The detail norm is at Annexure-I.

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2011

Scheme for planting of indigenous drought Hardy plant species and sowing of seeds in the appropriate area within existing forest to meet ecological in the Mining area of EoM COP & Corridor project.

**B. Cost Estimation:**

For Planting of seedlings						
Sl No	Description	Unit	Rate in Rs.	Quantity	Amount in Rs	Remark
1.	Planting cost including maintenance for 4 years	Ha	4,05,831/-	156.522	6,35,37,132.00	On retained area.
<b>G. Total</b>					<b>63537132.00</b>	

For Sowing of Seeds				
Sl No	Description	Rate	Quantity	Amount in Rs
1.	Cost of Seeds	1200/- per kg	500kg*5	30,00,000.00
2.	Dibbling / Broadcasting of seeds (in 1 <sup>st</sup> week of land)	2000/- per Kg	500*5	50,00,000.00
Total				80,00,000.00
G. Total (Tree Planting + Sowing of seeds)				7,15,77,132.00
Add 20% for Cost Escalation				1,43,17,426.00
<b>Total</b>				<b>8,58,94,558.00</b>

(Rupees Eight Crores Fifty Eight Lakh Forty Four Thousand and Five Hundred Fifty Eight Only)

**Technically Approved**

**Regional Chief, Directorate of Forests  
Bihar Circle**



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kuld's OCP & Extension project

#### 9. Physical & Financial Flow Chart:

Planting of Drought hardy Species						
Year	2026-27	2027-28	2028-29	2030-31	Total	
Area in Ha	43.5	44.472	22.85	22.85	156.522	
Showing of Seeds (Dibbling & Broadcasting)						
Seed (in Kg)	500	500	500	500	500	2500
Financial						
Plantation	17657999	18052563	9275523	9275523	9275523	63537131
Seed Sowing	1600000	1600000	1600000	1600000	1600000	8000000
Total	19257999	19652563	10875523	10875523	10875523	71537131
Add 20%	3851600	3930513	2175105	2175105	2175106	14307427
G: Total	23109599	23583076	13050628	13050628	13050628	85844558



Scheme for planting of drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kudla OCP & Lakshmi project

#### 10. Executing Agency:

The plantation of drought hardy species will be taken up by the user agency. They may engage any planting agency for a better result. Survival of tree species above 75% is desired. The overall implementation will be under technical guidance of the State Forest Department.

Encl: Approved Cost norm for planting of 1600 plants per ha & Mine Conceptual Plan.

General Manager,

Basundhara Area, MCL

Sundargarh.

Project Officer  
Kudla Opencast Project  
ଅନୁପମ ପ୍ରମୋଦ  
ଅନୁପମ ପ୍ରମୋଦ

DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

## Annexure-I

Cost Norm for Block Plantation @1600 Plants per hectare (18 months old seedlings)						
Wage Rate Rs. 462/- per Manday						
Sl. No	Item of work	Preferable period of execution	Labour in Man days	Labour Cost(Rs)	Material Cost(Rs)	Total Cost in(Rs)
	0TH Year (Advance Work) Survey					
1	Demarcation and Pillar posting Preparation	Dec	2.00	924	0.0	924.00
2	of Treatment Map (Digital Map)	Dec	1.00	462	0.0	462.00
3	Site Preparation (Cleaning & removal of debris)	Jan/ Feb	12.00	5544	0.0	5544.00
4	Creation of 4.00 mt wide inspection path	Feb/Mar	1.00	462		462.00
5	Alignment and Stacking	Feb/Mar	4.00	1848		1848.00
6	Digging of pits (45cm x 45cm x 45cm) /50cm diameter augur hole in hard & gravity soil	Feb/Mar	64.00	29568		29568.00
7	Construction of Temporary labour shed, Drinking water facility and First Aid etc.		0.00	0	2000	2000.00
	S. TOTAL Monitoring & Evaluation		84.00	38808.00	2000.00	40808.00
8	Documentation & Supervision charge i.e., 5% of the total Cost					2040.40
	YearTotal		84.00	38808.00	2000.00	42848.40
	1st year/Planting year					
1	Fencing by using GI wire mesh chain link for an average 250mtr/ Ha @Rs400/- mtr	May/June			100000.00	100000.0
2	Transportation of 18 months old seedlings by hired vehicle from the nursery including loading, unloading & stacking the same at planting site@Rs8/- per seedling (1760 nos) Average lead of 15 Rkm)	Jul/Aug			14080	14080.0
4	Watering the polypot seedlings at planting site	Jul/Aug	3.0	1386	0	1386.0
5	Conveyance of polypot seedlings on head load from the stacking site to individual dug out pits within the planting site, applying insecticide, fertilizers and planting after scooping the soil with other applied materials and pressing the soil properly around the planted seedlings. (in case organic manure is applied, bio pesticide should be used instead of insecticide)	Jul/Aug	40.0	18480		18480.0
	Cost of Fertilizer & Insecticide					
6	CMD/vermi-compost	Jul/Aug			15728	15728.0
a	Urea/Vermi compost/Mo Khata/any other					
b	fertilizer in two subsequent doses @ Rs 1200.00					



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

c	Insecticide/Bio-pesticide 5gms/plant=8kg @ Rs 150/- per kg =Rs 1200.00					
7	July/Aug, Replacement @10% (150nos)		4.0	1848	0	1848.0
8	Aug/Sep, Weeding & Manuring		15	6930	0	6930.0
8	2nd Weeding, Soil working (1mt diameter around the plants) and manuring		20	9240	0	9240.0
9	Fire line tracing (2mt wide fire line over 400m long) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
	Watch & Ward including watering as per Aug-Mar requirement		24	11088		11088.0
	S. Total		109	50358	129808	180166
10	Monitoring & Supervision charge 3% of the total cost					9009
	Year Total					189174
	2nd Year Maintenance					
2	Transportation of 160 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs 6/- per seedlings. Casualty Replacement -10%	Jul			1280	1280.0
3	Cost of fertilizer & Insecticide -A". Cost of insecticide/Bio-pesticide @ 5gms /plant =0.8kg @ Rs 150/- per kg= Rs 120/- B) Urea/NPK/Bio-fertilizer /Vermi-compost /Mo Khata /any other fertilizer @ Rs 4486/-	Aug Aug/Sep	4	1848	0	1848.0
					5240	5240.0
	Weeding (Complete weeding) , Manuring & Soil working (1mt diameter around plants)	Sep/Oct	20	9240		9240.0
	Fire line tracing (2m wide fire line over 400mt long) including maintenance of inspection path	Feb/Mar	3	1386		1386.0
	Watch & Ward including watering as per Apr-Mar requirement		36	16632	1000	17632.0
	Maintenance of Temporary Labour shed, Drinking water facility and First Aid etc.				1000	1000.0
	S. Total		63	29106	8520.00	37626.0
4	Monitoring & Supervision charge 5% of the total cost					1881.30
	Year Total					39507.30
	3rd Year Maintenance					
2	Cost of fertilizer (Urea/NPK/Bio-fertilizer/Vermi-compost /Mo Khata /any other fertilizer)	Sep/Oct			5120	5120.0
	Weeding , manuring & soil working (1mt diameter around the plants)	Sep/Oct	20	9240	0	9240.0



Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in the Mining lease area of Kulda OCP & Extension project

	Fire line tracing (2mt wide fire line over 400m long ) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
3	Watch & Ward for 12 months from April to Apr-Mar March (365days)		18	8316	700	9016.0
	S: Total		41	18942	5820.00	24762.0
4	Monitoring & Supervision charge 5% of the total cost					1238.10
	Year Total					26000.10
	4th Year Maintenance					
1	Fire line tracing (2mt wide fire line over 400m long ) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
2	Watch & Ward for 12 months from April to Apr-Mar March (365days)		18	8316	0	8316.0
	S: Total		21	9702	0.00	9702.0
4	Monitoring & Supervision charge 5% of the total cost					485.10
	Year Total					10187.10
	Grand Total					10187.10
			318.0	146916.0	146148.0	307717.20

Year wise Abstract (Including seedling cost)

Year	Person days	Labour Cost @462/-	Material cost 2000	Monitoring and Supervision @5%	Seedling cost @ 51.70	Total
0 <sup>th</sup>	84	38808.00	129808.00	9008.30	8272.00	133840.40
1 <sup>st</sup>	109	50358.00	7520.00	1831.30		197446.30
2 <sup>nd</sup>	63	29106.00	5820.00	1238.10		38457.30
3 <sup>rd</sup>	41	18942.00		485.10		26000.10
4 <sup>th</sup>	21	9702.00		14503.20		10187.10
	318	146916.00	143148.00		99264.00	405931.20





## Scheme

For Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in Mining lease area of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

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Compliance to Condition No 9(c) of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



Scheme for Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in the Mining lease area of Kulda OCP & Extension project of Mahanadi Coalfield Limited, Basundhara Area District Sundargarh, Odisha

#### 1. Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 534.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kism.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293 /2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 9 reads as follows.

9. Following activities as per approved plan / Schemes, shall be undertaken in the lease area by the user agency under supervision of the state forest Department.

- a. Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance with the approved plan in consultation with the State Forest department.
- b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with approved scheme.



Scheme for Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in the Mining lease area of Kulda OCP & Extension project.

- c. Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;
- d. Stabilize the overburden dumps by appropriate grading / benching, in accordance with the approved scheme, so as to ensure that angle of repose at any given place is less than 28°

This scheme is prepared to comply the condition no 9(c) of the in- principle approval orders as stated above.

## 2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land In Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Balunga		4.97	4.97	36.73	110.80	147.53	152.5
3	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
4	Basundhara		68.55	68.55	1.21	27.22	28.43	96.98
	Re-diverted Forest Land RFF.	88.25	0	88.25	0	353.74	462.94	88.25
	Total	88.25	274.33	362.58	109.20	4.33	104.32	825.51
		0	0	0	99.99	358.07	567.26	104.32
		88.25	274.33	362.58	209.19			929.83
				(-)8.52				(-) 8.52
				354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F. No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in- principle approval orders has been issued.



Scheme for Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in the Mining lease area of Kulda OCP & Extension project.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area Infrastructure	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	including Safety Zone and Embankment External dump	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	Total	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Redirected Washery	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5	for	(-)8.52	0	(-)8.52				
	Total	219.375	496.315	715.69	134.69	160.93	295.62	921.305

3. Present Method of Mining: Considering the prevalent mining and geological conditions,

Shovel dumper mining

system in overburden and surface miner (Windrowing), loader and dumper for coal

extraction has been adopted for mining. 4. OB Production & dumping pattern: In the

current approved mining plan, the OB Generation and process of stacking / stabilization has been dealt in the following manner.

4.1 Coal & Overburden Production Schedule:

Year	Coal in Mt	OB (Mcum)	SR (Cum/ T)
Yr-1 2022-23	21.0 21.0	23.52 23.73	1.12 1.13
Yr-2 2023-24	21.0 21.0	23.73 23.73	1.13 1.13
Yr-3 2024-25	21.0	24.15	1.15
Yr-4 2025-26			
Yr-5 2026-27			



Scheme for Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in the Mining lease area of Kulda OCP & Extension project.

Yr-6	2027-28	21.0	24.15	1.15
Yr-7	2028-29	21.0	24.15	1.15
Yr-8	2029-30	21.0	24.15	1.15
Yr-9	2030-31	21.0	24.15	1.15
Yr-10	2031-32	21.0	23.52	1.12
Yr-11	2032-33	8.627	4.026	0.47
	Total	218.627	243.006	1.11

The over burden including top soil is used for internal backfilling and construction of embankment along the Basundhara Nala. The quantum of OB and top soil used / proposed to be used is furnished below.

All figures are cumulative and in MM3									
Year	OB Removal (expected)			External dump		Internal dump		Embankment	
	Top Soil	OB	Total	Top Soil	OB	Top Soil	OB	Top Soil	OB
Base year (31.03.2022)	0.9	86.05	86.88	0.32	38.06	0.18	47.33	0	1.11
Y-1	1.05	109.5	110.4	0.42	44.04	0.36	62.08	0	1.11
Y-3	1.19	156.81	157.86	0.52	58.73	0.54	95.8	0	1.11
Y-5	1.62	204.55	205.74	0.52	72.48	1.1	131.63	0	1.11
Y-11		328.27	329.89		72.48		254.68		1.11

### 5.2 Existing Dumping Pattern:

External Dump-1: Situated on immediate rise side of adjoining Garjanbahal Block. About 38.33MCum has already been dumped as on 31.03.2022

External Dump -2. It is in the Dip side of Kulda block. Its capacity is about 31.94 MCum. The year wise OB dump likely to be stored / dumped till 31.03.2025 is 19.89 Mcum (Actually, this dump no 2 has not yet received any Overburden. Projected to be used after starting of excavation of Coal in Kulda Ext. Phase – after obtaining forest clearance.

Construction of Embankment: For Construction of Embankment along Chattenjhor nalla and Basundhara Nala, 1.11 MCum has already been dumped.

### 5.3 Role of a Toe wall against dump failure:



In coal mining, a toe wall, typically constructed at the base of an overburden dump, plays a crucial role in preventing dump failures. It acts as a stabilizing structure, enhancing the overall slope stability and preventing landslides or sliding of the dump material. By providing support at the toe, it reduces the risk of failure due to factors like groundwater accumulation, weathering, or foundation instability.

#### ☐ Provides lateral support:

The toe wall acts as a buttress, providing lateral support to the dump slope, preventing it from sliding outwards due to gravity or other destabilizing forces.

#### ☐ Reduces shear stress:

By reinforcing the base of the slope, the toe wall helps to reduce the shear stress on the dump material, minimizing the risk of shear failure.

#### ☐ Controls drainage:

Toe walls can incorporate drainage systems to manage groundwater and surface water runoff, preventing water from accumulating within the dump and reducing its destabilizing effects.

#### ☐ Improves overall stability:

By addressing potential failure points at the toe, the toe wall contributes to the overall stability of the dump slope, reducing the likelihood of catastrophic failures.

#### ☐ Examples of Toe Walls:

☐ Gabion toe walls: These are constructed using wire baskets filled with stones, providing a flexible and durable solution.

☐ Stone walls: Stone walls can be built to provide a sturdy barrier at the toe of the dump.

☐ Cantilever retaining walls: In some cases, reinforced concrete cantilever walls may be used, especially where space is limited or higher stability is required.

By implementing toe walls and other slope stabilization measures, mining operations can significantly reduce the risk of dump failures, ensuring the safety of workers and minimizing environmental damage.

#### 5.4 Present Dumping Modalities & Parameters:



At present internal back filling has started and most of the overburden generated will be dumped internally. Both internal & external dumps will be formed in 30m tiers with an overall slope of about 26<sup>o</sup>, angle of individual dump tire will be around 37<sup>o</sup> depending on angle of repose of material and there will be horizontal berm of width 30m in between the individual 30m dump tiers. Height of each dump may even kept at lesser height where the dump is near any road or locality. The berm between each dump tire is properly graded and drains has been provided at toe with proper gradient. Adequate distance from dump toe and movement zone is being maintained to avoid any accident due to slope failure.

#### 6. Steps being executed / implemented:

At present the following measures are being implemented to strengthen the base of the dump, avoid risk of dump failure and controlling soil erosion.

- 1 Toe wall has been constructed in risk zone with hard rocks generated / collected in process of mining,
- 2 The length of Toe wall constructed is about 500 meters for external dump and 1170m with GI mess wire Gabion support. (total: 1670m)
- 3 In important portions of the toe wall / guard wall, GI Wire mess support has been provided to enhance the toe wall stability.
- 4 For safe flow of runoff from various tires of dumps channels has been provided.
- 5 Covering of land in between toe walls and dump toe by planting of grasses



#### 7. Proposal to be implemented within this Scheme purview.

- 1 Stone wall / toe wall with GI Mess wire support over a length of 1000 m in case of Dump No 01, (@200m per year)



2 Stone wall / toe wall with GI Mess wire support over a length of 1000 m in case of Dump No 02, (after Dump No-02 is receiving the OB)

3 Replacement / reconstruction of Toe wall (in top melted Condition due to weathering) : 200m in dump no 01, (with GI Mess wire support) (@100m per year)

#### 7.1 Design of the toe wall:

Foundation Course: Foundation layer with 30cm Below Ground level, 90cm above Ground level i.e. Total 1.20m x width 1.50m X L

1st layer Super structure: 1.25m above foundation Layer Width: 1m

Top layer (2nd layer): 0.90m above 1st layer, Width 0.90m

All layers will be firmly fixed to ground with GI Mess wire





## 8. Cost Estimation:

### a) Cubic Content for 1 running meter:

- i. Foundation layer
- ii. Earth Work:  $0.30\text{m} \times 1.75\text{m} \times 1\text{m} = 0.525\text{cum}$   $0.525\text{cum} \times 2000 = 1050 \text{ cum}$
- iii. Foundation layer (RR Stone work):  $1.20\text{m} \times \text{width } 1.50\text{m} \times 1\text{m} = 1.80\text{cum}$   $*2000 = 3600 \text{ cum}$
- iv. 1st layer:  $1.25\text{m} \times 1\text{m} \times 1\text{m} = 1.25\text{cum}$   $*2000 = 2500\text{cum}$
- v. Top layer:  $0.90\text{m} \times 0.90\text{m} \times 1\text{m} = 0.81 \text{ cum}$   $*2000 = 1620\text{cum}$   
Total work required for 1m running length Toe wall construction:  
 $1.80\text{cum} + 1.25\text{cum} + 0.81\text{cum} = 3.86\text{cum}$
- vi. ~~Height~~ Mess wire Interlinked for 1m Running length: Total  
 $1.20\text{m} + 1.25\text{m} + 0.90\text{m} = \{3.35\text{m} (30\text{cm BGL} + 3.05\text{m above GL}) \times 2\} + 1.5\text{m} = 8.20 \text{ sq. m}$

Cost estimation for construction of Toe Wall / Retaining wall

Sl No	Item of Work	Unit	Rate	Quantum	Amount in lakh Rs	Remark
1	Earth Work	Cum	227.67	1050	2.39	(over 1000m for Dump 01 and 1000 m in Dump-2)
2	Foundation( RR Stone work)					
a	Collection of Hard Cum Rocks from OB excavated.		2000/-	$3.86 \times 2000$	154.40	
b	Random Rubble Cum Stone work arranging in proper shape / size to have adequate stability.		2200/-	$3.86 \times 2000$	169.84	
3	GI Mess wire Purchase Cost:	Sq.m	600/-	$8.20 \times 2000$	98.40	
4	Fixing Cost for GI Mess wire	Sq.m	90/-	$8.20 \times 2000$	14.76	
	Total Cost				439.79	For 2000 m length
	Average cost for 1m Toe wall					0.21990 L/ m



Scheme for Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in the sliding prone area of Kilda OCP & Extension project

5	Replacement / reconstruction of Toe wall	m	11.950	200	43.98	Damaged due to weathering effect / melting down of Toe wall)
	Unforeseen	Rs			10.00	
	Total cost				493.77	
	Add 20% for cost escalation				98.754	
	G. Total				592.524	

(Rupees Five Crore Ninety Two Lakh Fifty Two Thousand & Four Hundred Only)

9. Physical Flow Chart:

Work Description	Target (Total)	Year wise target				
		2026-27	2027-28	2028-29	2029-30	2030-31
Construction of Toe / Retaining Wall (Dump-01) including GI Mess wire Support.	1000m	200m	200m	200m	200m	200m
Construction of Toe / Retaining Wall (Dump-02) including GI Mess wire Support.	1000m	200m	200m	200m	200m	200m
Reconstruction of damaged Toe Wall including GI Mess wire Support.	200m	100m	100m			

10. Executing Agency:

The toe wall construction / replacement of damaged toe wall will be taken up by the user agency at project cost.

  
Project Officer  
Kilda OCP, BA, MCI  
Sundargarh

Project Officer  
Kilda Operational Project  
परियोजना अधिकारी  
कुल्डा वीजेएम

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

Technically Approved

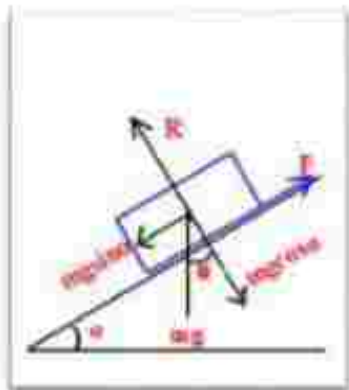
  
Regional Chief Conservator  
Rourkela Circle





## Scheme

To stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than  $28^{\circ}$  in case of Mining lease area of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

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Compliance to Condition No 9(d) of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 280 as it pertains to Mining lease area of Kulda OCP & Extension project of Mahanadi Coalfield Limited, Basundhara Area District: Sundargarh, Odisha.

## 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293 /2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 9 reads as follows.

9. Following activities as per approved plan / Schemes, shall be undertaken in the lease area by the user agency under supervision of the state forest Department.

- a. Mitigative measures to minimize soil erosion and chocking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance with the approved plan in consultation with the State Forest department.
- b. Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion in accordance with approved scheme.
- c. Construction of check dam, retention / toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

d. Stabilize the overburden dumps by appropriate grading / benching, in accordance with the approved scheme, so as to ensure that angle of repose at any given place is less than 28°

This scheme is prepared to comply the condition no 9(d) of the in- principle approval orders as stated above.

2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Bankibahal		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
5	Siarmal		68.55	68.55	1.21	27.22	28.43	96.98
6	Lamla RF	88.25	0	88.25	0	0	0	88.25
Total		88.25	274.33	362.58	109.20	353.74	462.94	825.51
Area outside the Lease		0	0	0	99.99	4.33	104.32	104.32
Total		88.25	274.33	362.58	209.19	358.07	567.26	929.83
Re-diverted Forest area				(-)8.52				(-) 8.52
G. Total				354.06	209.19			
						358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F. No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in- principle approval orders has been issued.



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.

Sl No	Land Use	At Present in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area Infrastructure	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	including Safety Zone and Embankment External dump	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	Total	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Redirected Washery for	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5	Total	(-)8.52	0	(-)8.52				
		219.375	406.315	625.69	134.69	160.93	295.62	921.305

### 3. Present Method of Mining:

Considering the prevalent mining and geological conditions, Shovel dumper mining system in overburden and surface miner (Windrowing), loader and dumper for coal extraction has been adopted for mining.

### 4. OB Production & dumping pattern:

In the current approved mining plan, the OB Generation and process of stacking / stabilization has been dealt in the following manner.

#### 4.1 Coal & Overburden Production Schedule:

Year	Coal in Mt	OB (Mcum)	SR (Cum/ T)
Yr-1 2022-23	21.0	23.52	1.12
Yr-2 2023-24	21.0	23.73	1.13
Yr-3 2024-25	21.0	23.73	1.13
Yr-4 2025-26	21.0	23.73	1.13
Yr-5 2026-27	21.0	24.15	1.15
Yr-6 2027-28	21.0	24.15	1.15



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

Yr-7	2028-29	21.0	24.15	1.15
Yr-8	2029-30	21.0	24.15	1.15
Yr-9	2030-31	21.0	24.15	1.15
Yr-10	2031-32	21.0	23.52	1.12
Yr-11	2032-33	8.627	4.026	0.47
	Total	218.627	243.006	1.11

The over burden including top soil is used for internal backfilling and construction of embankment along the Basundhara Nala. The quantum of OB and top soil used / proposed to be used is furnished below.

All figures are cumulative and in MM3										
Year	OB Removal (expected)			External dump		Internal dump		Embankment		
	Top Soil	OB	Total	Top Soil	OB	Top Soil	OB	Top Soil	OB	
Base year (31.03.2022)	0.83	86.05	86.88	0.27	38.06	0.09	47.33	0	1.11	
Y-1	22-23	0.9	109.5	110.4	0.32	44.04	0.18	62.08	0	1.11
Y-3	24-25	1.05	156.81	157.86	0.42	58.73	0.36	95.8	0	1.11
Y-5	26-27	1.19	204.55	205.74	0.52	72.48	0.54	131.63	0	1.11
Y-11	32-33	1.62	328.27	329.89	0.52	72.48	1.1	254.68	0	1.11

4.2 Existing Dumping Pattern: External Dump-1: Situated on immediate rise side of adjoining Garjanbahal Block. About

38.33MCum has already been dumped as on 31.03.2022

External Dump -2. It is in the Dip side of Kulda block. Its capacity is about 31.94 MCum.

The year wise OB dump likely to be stored / dumped till 31.03.2025 is 19.89 Mcum (Actually, this dump no 2 has not yet received any Overburden. Projected to be used after starting of excavation of Coal in Kulda Ext. Phase – after obtaining forest clearance.

Construction of Embankment: For Construction of Embankment along Chattenjhor nalla and Basundhara Nala, 1.11 MCum has already been dumped.



### 5. Types of Dump failure:

Dump failure in coal mines can manifest in several ways, including circular, slope, toe, and base failures. These failures can be triggered by factors like the dump's geometry, the strength and properties of the dump material and foundation, and the influence of water. Understanding these failure mechanisms is crucial for maintaining dump stability and preventing accidents.

#### 5.1 Breakdown / Dump Failure of the common types:

1. **Circular Failure:** This type of failure is characterized by a curved rupture surface within the dump material. It's often influenced by the shape and size of the fragments within the dump and the geological conditions of the slope.
2. **Slope Failure:** Slope failure refers to the overall instability of the dump slope. It can occur in various forms, such as shallow slope failures or deep-seated failures involving the entire dump. This is a common failure mode in weak, loose, or fractured rock materials.
3. **Toe Failure:** This occurs when the toe (bottom) of the dump slope gives way, leading to a sliding or collapse of the material above.
4. **Base Failure:** This involves failure along the foundation of the dump, potentially leading to heave or translation of the dump mass.
5. **Shallow Slumping:** This type of failure involves superficial slumping of the dump face, often due to the accumulation of water or changes in the material properties near the surface.
6. **Large-Scale Instability:** This refers to major failures involving a significant portion or the entire dump, often due to inadequate slope angles, insufficient dump height, or weak foundation conditions.

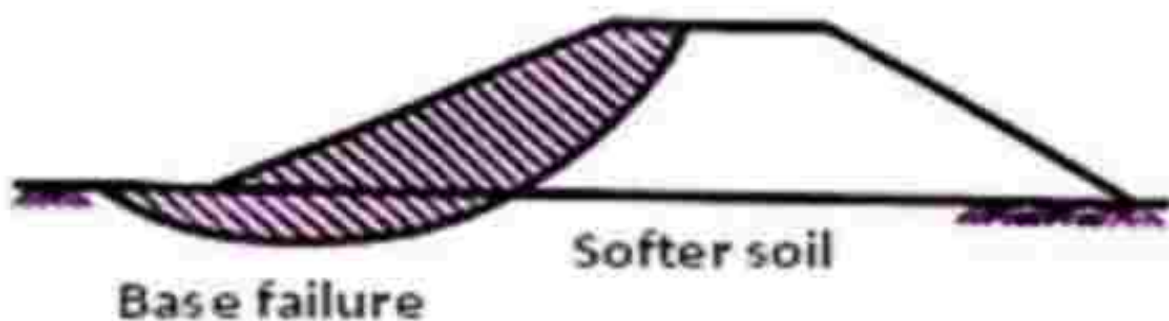
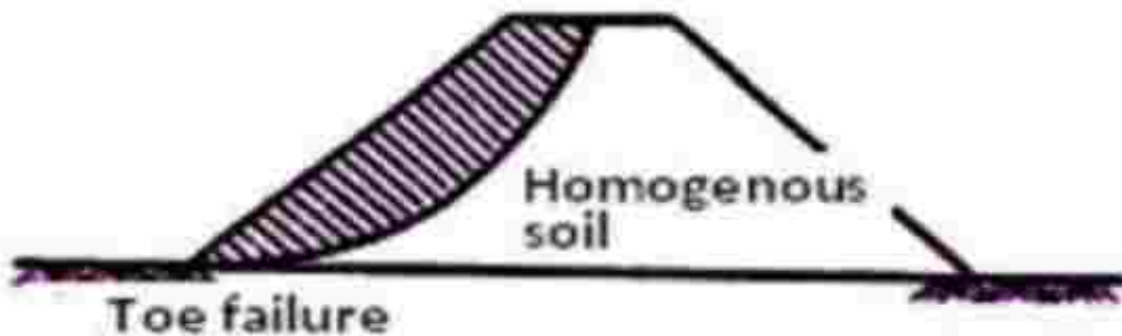
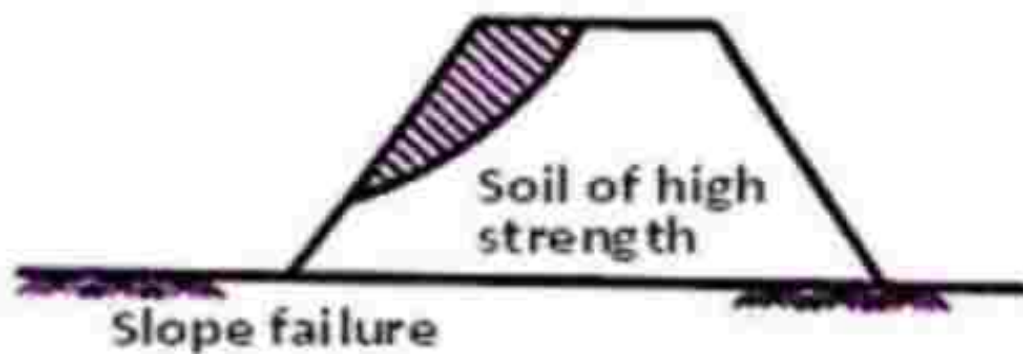
#### 5.2 Factors Influencing Dump Failure:

- **Dump Material Properties:** The strength, shear resistance, and water content of the dump material significantly affect stability.
- **Geological Conditions:** The underlying geology, including the presence of weak layers or fractures, can influence the failure mechanism.



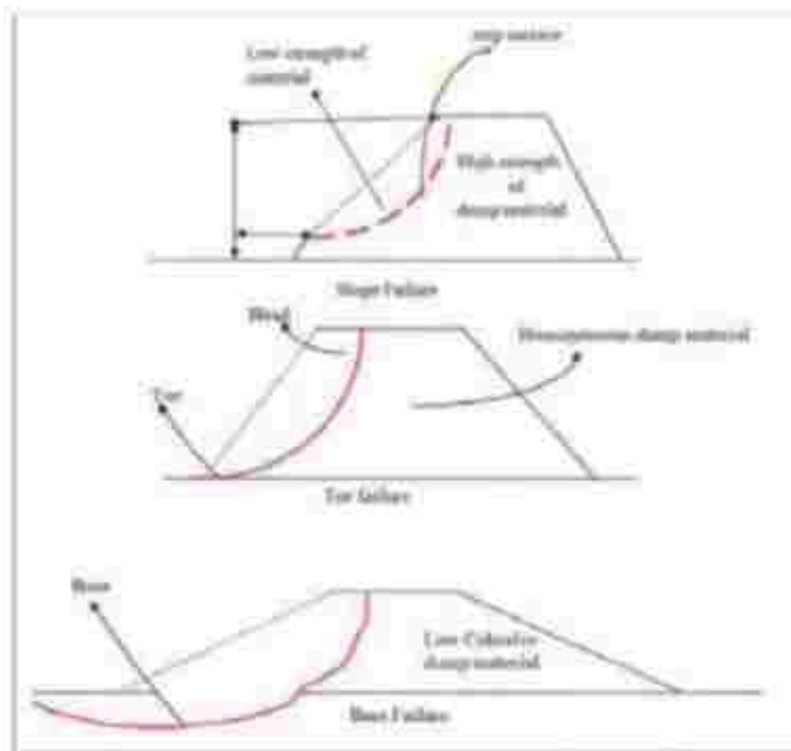
Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

- **Drainage and Water Infiltration:** The presence of water can reduce the strength of the dump material and increase the likelihood of failure. Drainage systems and water management are crucial.
- **Slope Angle and Height:** Steeper slopes and greater dump heights increase the risk of failure. Proper design and construction practices are essential.
- **Foundation Conditions:** The strength and stability of the dump foundation are critical for overall stability. Weak foundations can lead to heave or sliding.





Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than  $28^{\circ}$



**5.3 Present Dumping Modalities & Parameters:** At present internal back filling has started and most of the overburden generated will be dumped internally. Both internal & external dumps will be formed in 30m tiers with an overall slope of about  $26^{\circ}$ , angle of individual dump tier will be around  $37^{\circ}$  depending on angle of repose of material and there will be horizontal berm of width 30m in between the individual 30m dump tiers. Height of each dump may even kept at lesser height where the dump is near any road or locality. The berm between each dump tier is properly graded and drains has been provided at toe with proper gradient. Adequate distance from dump toe and movement zone is being maintained to avoid any accident due to slope failure.

#### 6.0 Importance of Grading & Benching:

In coal mine overburden (OB) dumps, benching involves creating horizontal platforms or levels within the dump to manage its overall height and slope, enhancing stability and safety.



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

Grading refers to the process of leveling and shaping the dump's surface, often involving the use of dozers and graders, to achieve a desired slope and prevent water accumulation.

#### 6.1 Benching:

**Purpose:** Benching is a crucial technique for managing the height of OB dumps, which can reach significant elevations.

**Method:** It involves creating horizontal platforms (benches) within the dump, typically with a maximum height of 30 meters for each bench.

**Angle of Repose:** The angle of each bench is designed to be less than the natural angle of repose of the dump material, generally around 37 degrees, to prevent slippage.

**Overall Slope:** The overall slope of the dump, considering all benches, is maintained at a gentler angle, typically less than 28 degrees, to further enhance stability.

#### 6.2 Berm:

**Berm:** A horizontal berm (terrace) of a specified width is provided between each bench to provide additional stability and drainage.

#### 6.3 Grading:

**Purpose:** Grading is essential for creating a stable and safe surface on the OB dump, preventing water accumulation and potential instability.

**Method:** It involves using machinery like dozers and graders to level the dump's surface, creating a gentle slope and preventing the formation of low-lying areas where water could collect.

**Drainage:** Grading often includes the creation of drainage channels or garland drains to divert water away from the dump and prevent erosion.

#### Overall Goal:

The primary goal of both benching and grading in OB dumps is to ensure the long-term stability of the dump, minimizing the risk of slope failure and ensuring safe operation and environmental protection.

#### 7.0 Present pattern of Dumping:

- a) Three tier dumping adopted. Each tier height is 30m
- b) Overall Slope is about 26°, angle of Individual dump is around 37°

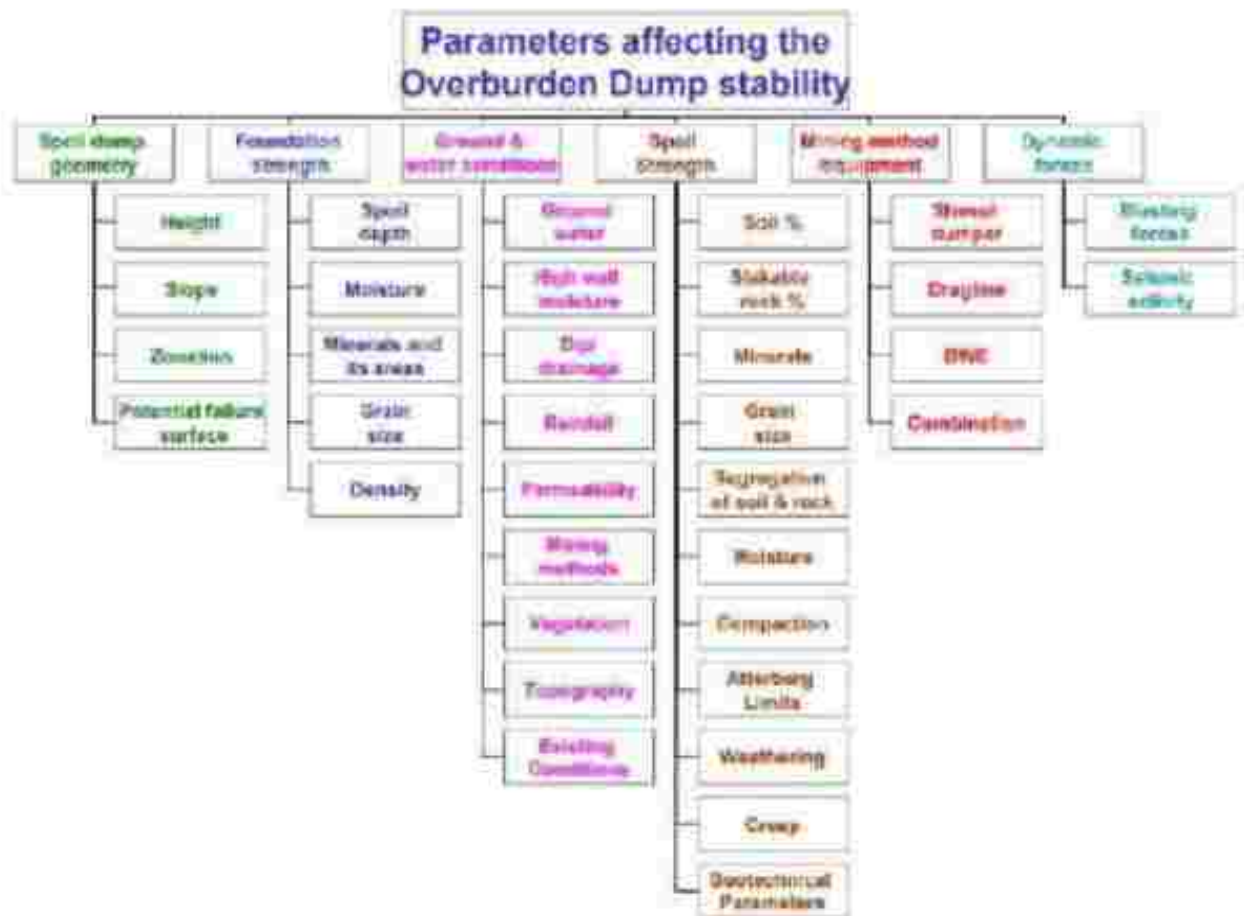


Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

c) Drain provided at the toe of the Tires with proper grading.

### 8.0 Designing of Dump for better stabilization:

The quality of overburden Soil, Rock / composition etc are constant factors of a mine i.e. Kolda OCP & its extension area under consideration. The various parameters those influence stability of an overburden dump is furnished below.



The present Scheme deals with the Grading & benching of Dumps so as to have best stabilization. A typical design with repose angle 36-38° is depicted below.



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°



As per the existing guidelines, the slope of an OB dump bench shall be determined by the natural angle of repose of the material being deposited but, in any case, shall not exceed 37° from the horizontal. Any OB dump exceeding 30 m in height shall be benched so that no bench exceeds the height of 30 m and the overall slope shall not exceed 26°

The berm width can be increased where nearby roads / habitations exist. In case of failure, the slipped away materials will not rolled down to roads etc.

#### 9.0 Field observation & recommendation:

During field visit, it is observed that the 1st terrace has been saturated to its capacity and 2nd terrace is accommodating the Overburden. The height has been maintained as required and the slope is in accordance with the guidelines. The mining activities is going on and internal dumping is being followed. In addition to maintaining the height & slope as described above the following activities will be implemented to prevent dump failure.

- The benches will be sloped towards inner side of the Dump by 10 to 20 degree so that rain water, bench runoff will not flow towards outer side,
- During heavy rainfall, the bench runoff acquires high speed / velocity and causes scouring at the base of the 2nd terrace and on bench.



Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

- There will be channel at the base of the 2nd terrace size 60cm x 22.5 cm and precast cement concrete channel as shown below will be placed to prevent scouring / erosion of soil.
- 2/3rd of the channel at the middle portion of the dump will have such provision. To siphon out the runoff in the channel provision for cross channel across the bench and then draining the water down by 8" dia PVC pipe or by Precast Cement Concrete Channel .
- Covered Concrete channel or Grilled Channel may be used for cross draining. Over rest 1/3rd of the channel Doob Grass surfing is suggested (where the runoff velocity is mild / slow).
- The probable channel length is  $2/3(3783\text{m}) = 2522 \text{ m}$

### 9.1 Planting of seedlings & Grass seeding.

In order to strengthening the Dump stabilization, it proposed to taken multi prong activities as follows.

- (i) Broadcasting of Grass seeds; ( on channels on Berms)
- (ii) Planting tree species preferable Soil binders.

#### 9.1.1 Broadcasting of Grass seeds;

In order to protect the channels (Earthen part i.e. 1/3rd of the Channel length) it is proposed to broad cast grass seeds preferable Doob Grass (*Cynodon dactylon*) in month of June 1st & 2nd Week. Grass surfing including collection / transportation & surfing a sum of Rs 100/- per 1 running meter over 1261.0 m. Hence a cost of Rs 1, 26, 200/- is proposed





Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

A channel covered with "Doob Grass" typically refers to a drainage channel or irrigation ditch where the grass species *Cynodon dactylon*, commonly known as Doob grass or Bermuda grass, is growing. Doob grass is a fast-spreading, perennial grass known for its ability to bind soil and withstand harsh conditions, making it suitable for covering channels and preventing erosion.

#### 9.1.2 Planting tree species preferable Soil binders.

On the dump surface, there are difficult locations where tree planting is not only difficult but also survival is poor. In order to address the situation, it is proposed to plant cuttings of *Vitex negundo* (Begunia) at a close spacing 1.5m x 1.5m at difficult locations. It is a very good soil binder and also protects the surface from soil erosion due to rain drops hitting. At the time of planting of cuttings rootex powder may be used. (Rootex nourishes rooting medium and induces a healthy rooting system. To use, dip the lower half inch of the cutting into water. Shake to remove excess.) It is proposed to plant 5000 plants @ Rs 200/- per cuttings. Each year 1000 cuttings to be planted. Hence a sum of Rs 10.00 lakh (10000000) is proposed.







Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°

10. Cost estimation:

For Grading & benching of Overburden dump

Sl No	Description	Rate	Quantum	Amount in Rs	Remark
01	Transportation and dumping of Overburden	Part of Mining activities no cost estimated			
02	Providing Precast Concrete Channel over 2522 m	Rs250/- per m	2522	6,30,500.00	
03	Gross covered channel (Across the bench width) 33m x 26 location = 858 m	Rs500/- per m	858	4,29,000.00	
04	Water draining channel from top of the bench to down (Ground level or 1 <sup>st</sup> Terrace channel) 26*35m	Rs 500/- Per m	910	4,55,000.00	Width and depth 30cm
05	Grass surfing including collection / transportation & surfing	Rs100/- per m	1261	1,26,100.00	1/3(3783m) = 1261m
06	Overall maintenance / unforeseen	1.00 Lakh per Yr	5 yr	5,00,000.00	
07	Planting of Soil Binder (Virex negundo)-5000 plants	200/- per plant	5000 no	10,00,000.00	@1000 plants per year
	<b>Total</b>			3140600.00	
	Add 20% for cost escalation			628120.00	
	<b>G. total</b>			37,68,720.00	

(Rupees Thirty Seven Lakh Sixty Eight Thousand and Seven Hundred Twenty Only)

Technically Approved

Regional Chief Conservator of Forests  
Rourkela Circle

	Scheme to stabilize the overburden dumps by appropriate grading / benching so as to ensure that angle of repose at any given place is less than 28°.
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**11. Executing Agency:**

The proposed grading & benching system is a continuous work along with the mining activities. The water channels on Berm needs to be implemented at an urgent basis to prevent scouring of channels / base of the dump tires. A stitch in time saves hundreds in future. Under this principle, this work is to be implemented as quickly as possible preferable within 1 year.

  
 General Manager,  
 Basundhara Area, MCL  
 Sundargarh

Project Officer  
 Kuidas Opencast Project  
 ଉପକ୍ରମ ଅଧିକାରୀ  
 କୁଇଡା ଓପେନକାସ୍ଟ

  
 REGIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR DEVELOPMENT & MANAGEMENT OF SAFETY ZONE**

**Annexure-XVI**

It is undertaken that the development and management of the safety zone, including green belt development, erection of RCC boundary pillars, fencing, and plantation activities, will be done under the supervision of the State Forest Department. All RCC pillars will be erected and inscribed with DGPS coordinates as per the prescribed guidelines. Plantation within the safety zone will be undertaken as per the approved scheme to ensure dense canopy and effective regeneration. Regular monitoring and maintenance of the safety zone will be carried out under the supervision of the State Forest Department.

Annex

Date... 06.11.2025 .....

Place... Basundhara .....

  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



## Scheme

To maintain Safety Zone (7.5meter strip all along the inner boundary of the Mining lease area) as green belt and to ensure dense canopy on safety zone of Kulda OCP of Mahanadi Coalfield Limited, Basundhara Area.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

---

Compliance to Condition No 10 (c) of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025

Scheme to maintain Safety Zone (7.5meter strip all along the inner boundary of the Mining lease area) as green belt and to ensure dense canopy on safety zone of Kulda OCP of Mahanadi Coalfield Limited, Basundhara Area District: Sundargarh, Odisha.

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#### 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293 /2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 10(c) reads as follows.

"10. Safety Zone Management: Following activities, at project cost, shall be undertaken by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines:

- a. User agency shall ensure demarcation of safety zone (7.5 meter strip all along the inner boundary of the mining lease area), and its fencing , protection and regeneration by erecting adequate number of 6feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under the supervision of the State Forest department;
- b. Boundary of the safety zone of the mining lease, adjacent to habitation / roads, should be properly fenced by the user agency;

c. Safety Zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under supervision of the State Forest Department.

d. The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms;

This scheme is prepared to comply the condition no 10(c) of the in- principle approval orders as stated above.

## 2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Bankibahal		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
5	Siarmal		68.55	68.55	1.21	27.22	28.43	96.98
6	Lamla RF	88.25	0	88.25	0	0	0	88.25
Total		88.25	274.33	362.58	109.20	353.74	462.94	825.51
Area outside the Lease		0	0	0	99.99	4.33	104.32	104.32
Total		88.25	274.33	362.58	209.19	358.07	567.26	929.83
Re-diverted Forest area				(-)8.52				(-) 8.52
F. Total				354.06				921.305
					209.19	358.07	567.26	

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F. No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion

proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in- principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest		Total	Forest	Non Forest	Total	
1	Quarry Excavation area Infrastructure	134.755 187.16		321.915	110.92	107.15	218.07	539.985
2	including Safety Zone and Embankment External dump	36.615	115.178	151.793	9.84	49.28	59.12	210.913
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4	Redirected Washery	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5	for	(-)8.52	0	(-)8.52				
	Total	219.375	406.315	625.69	134.69	160.93	295.62	921.305

### 3. Objectives of the Scheme:

From the stipulated conditions of Stage-I orders as stated above the objectives have been derived as follows.

- i) Safety Zone shall be maintained as green belt around mining lease;
- ii) To ensure dense canopy in the area
- iii) Regeneration shall be taken up in this area by Artificial regeneration of Assisted Natural Regeneration ( ANR);

The above activities will be at project cost under supervision of the State Forest Department.

### 4. Area under safety Zone:

The Kulda OCP is at present is confine to 625.69ha. The proposal for its extension by an area of 295.62ha has been approved by the MCL. The involved forest land diversion has also accorded by MoEF&CC, Govt. of India, New Delhi is under consideration.

The details of safety Zone involved in the Kulda Expansion mining project as furnished below,

Details of safety Zone area involved in the Kulda Expansion mining project					
SINo	Village	Forest Land in Ha	Govt. land in Ha	NF Acquired Land in Ha	Pvt. Total
1	Kulda	0	6.147	5.775	11.922
2	Bankibahal	0	0	3.323	3.323
3	Tumulia	0.364	11.400	22.465	34.229
4	Lalma RF	9.413	0	0	9.413
	Total	9.777	17.547	31.563	58.887

5. Present Crop condition (Safety Zone area) The safety zone area bears a natural forest growth (partly). The crop is dry deciduous in nature. Sal, Asan, Arjun, Kendu, Chara, Dhaura, Bamboo are occurring on the safety zone along with the planted saplings i.e. Sana Chakunda, Acacia, Kadamba, Neem, Jamun, Karanja. Besides planted seedlings, there are under growth (which seems dense) in rainy season. In summery the under growth became thin and completely porous. Seedlings of natural vegetation are also observed.

The crop density is about 0.3

6. Proposal to enhance & juvenile the crop:

The area coming under safety zone will be treated under four prong action plan i.e.

- a) Silvicultural cleaning operation;
- b) Planting of species associated with Sal Forest @ 500 plants per ha i.e. (ANR with gap planting @500 plants per ha)
- c) Adequate SMC on Safety Zone with care to naturally occurring saplings.
- d) Broad casting of seeds i.e. Bamboo, Jamun and Simal (Simili)

## 7. Operational details:

### 7.1 Silvicultural cleaning operation:

The silvicultural cleaning is intended to achieve healthy growth of existing seedlings / saplings / coppice shoots of any species. The operation includes

- Cutting back of high stumps with preference to living stumps and having a good coppicing power.
- Cutting of climbers those are of annual nature and uprooting them wherever possible. The woody climbers those are interlocking the existing trees should not be cutback as it gives enforcement to trees.
- Singling out of multiple coppice shoots and retaining most promising ones.

### 7.2 Planting of species associated with Sal Forest & post care operation:

Plantation of indigenous species matching with the local species is required to be planted following the cost norm of Plantations approved by Forest department. The species suggested are Asan (*Terminalia tomentosa*), Arjun (*T. arjuna*), Bahada (*T. belerica*), Jamu (*Syzygiumcumini*), Sisoo (*Dalbergi sisoo*), Bamboo (*Dendrocalamus Strictus*) etc. The SZ area towards Basundhara Nalla, Fasi (*Anogeissus acuminata*) may be planted. Safety zone towards habitation, Jamun, mango and species of aesthetic value will be given priority.

The detail steps of planting and post care as provided in the cost norm (ANR with gap planting @500 plants per ha) enclosed to be followed. (Annexure-I)

### 7.3 Adequate SMC on Safety Zone with care to naturally occurring saplings.

The area in Safety Zone display a moderate slope towards Basundhara. The southern side, some undulating terrain is observed. As the Safety zone is narrow, it is proposed to have staggered trenches 60 numbers per ha (Size: 2m x 0.5m x 0.5m) along the contour line will be provided. In eroded rill formed area LBCD with 45cm high will be provided. In the cost norm there is provision for SMC under ANR with gap planting.

The natural seedlings available in the treatment area are to be given appropriate attention to ensure its establishment.

The following measures are prescribed.

- Deep Soil Working around the seedlings at a width of 0.50 m with application of fertilizer.
- Weeds to be removed / uprooted at a radius of 1 meter.

- In case of sloppy location Half Moon trench to be provided.



Besides the provisions made a sum of Rs 15000/- per ha is provided to intensify SMC activities as prescribed above.

#### 7.4 Broad casting of seeds i.e. Bamboo, Jamun and Simal (Simili)

In order to enhance crop density, in addition to artificial regeneration as mentioned above, it is proposed to broad cast seeds of Bamboo, Jamun, Simal to encourage natural regeneration. Every year 10 kg of seeds of above species will be broadcasted and care will be taken for its establishment subsequently. A sum of Rs1200/- per kg towards seed cost is provided. For broadcasting Rs2000/- per ha is also provided. This operation will be taken up for 5 years.

### 8. Cost estimation:

Sl No	Work description	Unit	Rate	Quantum	Amount in Rs	Remark
1	Silvicultural Cleaning operation and gap planting @500 plants per ha ( ANR with gap Planting)	Ha	125323.65	58.89	7380309.75	Details of work plan as per approved cost norm
2	Add. SMC	Ha	15000/-	58.89	883350.00	
3a	Broad casting of seeds (Cost of seeds)	Kg	1200/-	10 kg*5 yr	60000.00	
3b	Broadcasting	Ha/ yr	2000/-	2000*58.89 *5	588900.00	
	Total				8912559.75	
	Add 20% for cost escalation				1782511.95	
	Total				10695071.70 or say 1,06,95,072/-	

(Rupees One Crore Six lakh Ninety Five Thousand & Seventy Two Only)

### 9. Executing Agency:

The proposed activities will be implemented by the user agency under supervision of State Forest Department / DFO, Sundargarh. As it involves technical activities, they may engage organizations / experts in forestry matter.

Encl: Safety Zone Map & cost norm for ANR with Gap planting @500 Plants per ha ;

General Manager,  
Basundhara Area, MCI  
Sundargarh

Project Officer  
Kulda Opencast Project  
ସିଲିକଲ୍ଟର ପ୍ରକଳ୍ପ  
କଲ୍ଡା ସିଲିକଲ୍ଟର

DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

Technically Approved

Regional Chief Conservator of Forests  
Rourkela Circle

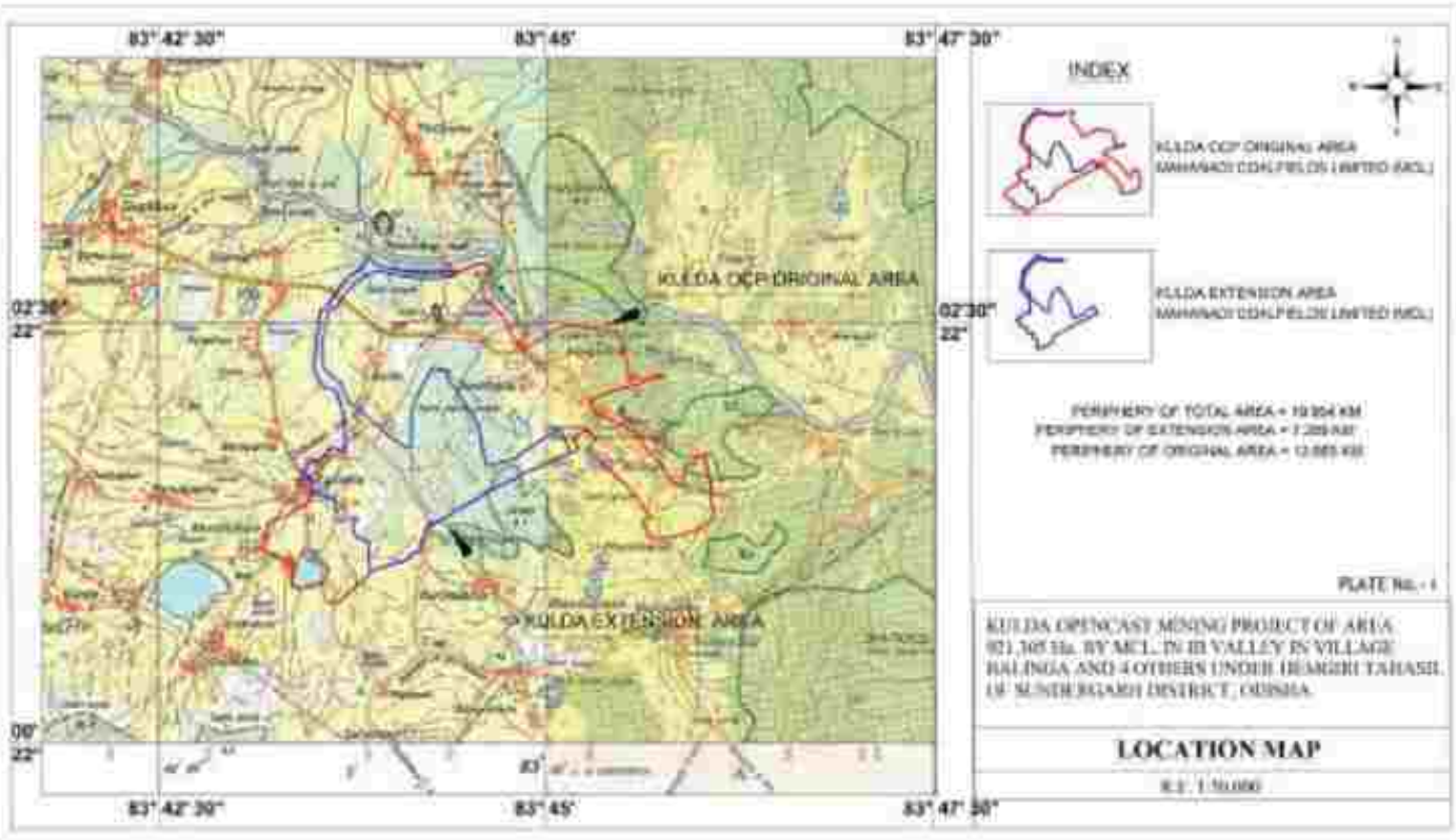
## Annexure-I

Cost Norm for ANR with gap planting @500 Plants per Hectare (18 months oldseedlings) Wage Rate Rs. 462/- per Manday						
Sl. No.	Item of work	Preferable period of execution	Labour in Man days	Labour Cost (Rs)	Material Cost (Rs)	Total Cost In (Rs)
1	2	3	4	5	6	7
	0TH YEAR (Advance work)					
1	Survey, Demarcation and Pillar posting Preparation of Treatment Map (Digital Map)					924.00
2	Site Preparation (Cleaning & removal of debris)	Nov / Dec	1	462.00		462.00
3	Silvicultural operations including cutting of high stumps, singling out of multiple shoots, climber cutting, clearance of weeds & removal of debris from the fields to blank space	Jan / Feb	4	1848.00		1848.00
4	Alignment and Stacking	Jan / Feb	12	6720.00		6720.00
5	Digging of pits (45cm x 45cm x 45cm) /50cm diameter augur hole in hard & gravity soil	Feb / Mar	10	4620.00		4620.00
6	S. TOTAL		40	19656.00		9240.00
	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost				0.00	19656.00
7						982.80
	Total of the Yr		40	19656.00	0.00	20638.80
	1st Year / Planting Year					
1	Fencing by using Bamboo Twigs & Thorns / Brushwood / any other	June / July	12.00	5544	2500.00	8044.00
2	Transportation of 18 months old seedlings by hired vehicle from the nursery including loading, unloading & stacking the same at planting site @Rs8/- per seedling (1760 nos) Average lead of 15 Rkm)	Jul / Aug	0.00	0	4400.00	4400.00
3	Watering the poly pot seedlings at planting site	Jul / Aug	1.00	462	0.00	462.00
4	Conveyance of poly pot seedlings on head load from the stacking site to individual dug out pits within the planting site; applying insecticide, fertilizers and planting after with other applied. Note: In case of pressing the soil properly around the planted seedlings, insecticide should be used instead of insecticide) Cost of Fertilizer & Insecticide	Jul / Aug	12.50	5775	0.00	5775.00
5	CMD/ Vermicompost/ Organic Manure as					
a	Basal Dose	Jul / Aug	0.00	0	4915.00	4915.00
b	NPK @ 50 gms/plant as basal dose					

c	Insecticide/Bio-pesticide @ 5gms/plant					
d	Urea @ 30 gms:per plant					
e	Jivamruta/ Herbal based plant growing products					
6	Casualty Replacement @10% (50 nos)	Jul/ Aug	1.50	693	0.00	693.00
7	1st weeding & Manuring (Application of Urea)	Aug / Sept	5.00	2310	0.00	2310.00
8	2nd Weeding , Soil working (1mt diameter around the plants ) and manuring	Sep/Oct	8.00	3696	0.00	3696.00
9	Fire line tracing (2mt wide fire line over 400m long ) including maintenance of inspection path	Feb / Mar	3.00	1386	0.00	1386.00
10	Watch & Ward against grazing and other Biotic interference	Aug / Mar	8.00	3696	0.00	3696.00
	S. TOTAL		51	23562	11815.00	35377.0
11	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost					1768.9
	Total of the Yr		51	23562	11815.00	37145.9
	<b>2nd YEAR MAINTENANCE</b>					
1	Transportation of 50-nos of 18 months-old seedling by hired vehicle from Nursery to plantation site including loading, unloading @ Rs. 8/- per seedling (Average lead of 15 RKM)	Jul		0	0	400
						400.00
2	Casualty Replacement -10%	Jul	2	924		924.00
3	Cost of Fertilizer & Insecticide (a) Bio-pesticide/ Insecticide @ 5 gms/ plant (b) NPK/ Urea/ Herbal based plant growing product	July / Aug	0	0	1638	1638.00
4	Weeding (Complete weeding) & Soil working (1mt diameter around plants) & Manuring (Application of NPK/Urea/ Herbal based plant growing product)	Sept / Oct	10	4620	0	4620.00
5	Fire line tracing (3m wide fire line over 300mt long) including maintenance of inspection path	Feb / Mar	3	1386	0	1386.00
6	Watch & Ward against grazing and other Biotic interface, Repair & maintenance of fencing	Apr-Mar	12	5544	0	5544.00
	S. TOTAL		27	12474	2038	14512.00
7	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost		0	0	0	725.60
	Total of the Yr		27	12474	2038	15237.60
	<b>3 YEAR MAINTENANCE</b>					

1.	Cost fertilizer/Vermicompost/Plant growing product Weeding (Complete weeding) working	Aug / Sept	0	0	1600	1600.0
2.	(1mt diameter around the plants) and Manuring (Application NPK / Urea/ Herbal based plant growing product)	Sep/Oct	10	4620	0	4620.0
3.	Fire line tracing (3mt wide fire line over 300m long) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
4.	Watch & Ward against grazing & other biotic interference; repair & maintenance of fencing	Apr-Mar	12	5544	188	5732.0
	S. TOTAL					
	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost		25	11550	1788.00	13338.0
5.	Total of the Yr					666.9
	4th YEAR MAINTENANCE		25	11550	1788.00	14004.9
	Fire line tracing (3mt wide fire line over 300m long ) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
1.	Watch & Ward against grazing & other biotic interference, repair & maintenance of fencing	Apr-Mar	12	5544	0	5544.0
2.	S. TOTAL					
	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost		15	6930	0.0	6930.0
3.	Total of the Yr					346.5
	G. Total		15.0	6930.0	0.0	7276.50
						94303.65

Year	No. Of Man days	Labour Cost @462/-	Material cost (Rs.)	Monitoring and Supervision @5%	Seedling cost@ 51.70	Total
0th	40	19656.00	0.00	982.80		20638.80
1st	51	23562	11815.00	1768.85	28435.00	65580.85
2nd	27	12474	2038	725.60	2585.00	17822.60
3rd	25	11550	1788.00	666.90		14004.90
4th	15	6930	0.0	346.50		7276.50
Grand Total		74172.00	15641.00	4490.65	31020.00	125323.65



*Handwritten mark*

*Signature*  
 Project Officer  
 KILDA OCP  
 MAHARAJI COALFIELDS LIMITED  
 Bhubaneswar

UNDERTAKING FOR PROPER TOP SOIL MANAGEMENT

Annexure-XVIII

It is hereby undertaken that the Topsoil generated during mining operations will be separately stored and preserved in designated areas to prevent degradation and will effectively be utilized for reclamation and biological restoration as per the Topsoil Management Plan incorporated in the approved Mining Plan cum Mine Closure Plan.

  
(Signature of User Agency)  
Official Seal

Date 06.11.2025

Place Basundhara

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

AGENCY COPY	
	
	
NEFT / RTGS CHALLAN for CAMPA Funds	
Date : 14-11-2025	
Agency Name.	KULDA EXPANSION OCP, BABUNDHARA AREA, MCL
Application No.	5880293263
MoEF/SG File No.	8-07/2024-FC
Location.	ORISSA
Address.	Kulda OCP, MCL, Basundhara Area, Sundargarh, Odisha 776078 Sundargarh
Amount (in Rs)	2762412/-
Amount in Words : Twenty-Seven Lakh Sixty-Ten Thousand Four Hundred and Twelve Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	UBIN0996336
Pay to Account No.	180825880293263 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India PCB Centre, 21/1, III Floor, Jaitta Towers, Mission Road, Bengaluru-560027
- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only	

BANK COPY	
	
	
NEFT / RTGS CHALLAN for CAMPA Funds	
Date : 14-11-2025	
Agency Name.	KULDA EXPANSION OCP, BABUNDHARA AREA, MCL
Application No.	5880293263
MoEF/SG File No.	8-07/2024-FC
Location.	ORISSA
Address:	Kulda OCP, MCL, Basundhara Area, Sundargarh, Odisha 776078 Sundargarh
Amount (in Rs)	2762412/-
Amount in Words : Twenty-Seven Lakh Sixty-Ten Thousand Four Hundred and Twelve Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORISSA CAMPA
IFSC Code:	UBIN0996336
Pay to Account No.	180825880293263 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India PCB Centre, 21/1, III Floor, Jaitta Towers, Mission Road, Bengaluru-560027
- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only	

Note: After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: [fcblr@unionbankofindia.bank](mailto:fcblr@unionbankofindia.bank), [spursa@unionbankofindia.bank](mailto:spursa@unionbankofindia.bank), [ubin0903710@unionbankofindia.bank](mailto:ubin0903710@unionbankofindia.bank)

Annexure



AGENCY COPY

**यूनियन बैंक Union Bank of India**

NEFT / RTGS CHALLAN for CAMPA Funds

Date : 14-11-2025

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	6890293283
NeFT/RTGS File No.	8-47/2024-FC
Location.	ORISSA
Address.	Kulda OCP, MCL, Basundhara Area, Sundergarh, Odisha 770078Sundergarh
Amount(In Rs)	3762412/-

Amount in Words Twenty-Seven Lakh Sixty-Two Thousand Four Hundred and Twelve Rupees Only

CHALO - 324464 dt. 14.11.25

NEFT/RTGS to be made as per following details;

Beneficiary Name:	ORISSA CAMPA
IFSC Code:	UBIN0898338
Pay to Account No.	159825950283283 Valid only for this challan amount.
Bank Name & Address:	Union Bank Of India FCB Centre, 21/1, III Floor, Jubilee Towers, Missions Road, Bengaluru-560037

• This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

Notes: After making the required payment through c even after 7 working days, then kindly mail a copy of id to Email: [fcablr@unionbankofindia.bank](mailto:fcablr@unionbankofindia.bank), [apurseubin08983710@unionbankofindia.bank](mailto:apurseubin08983710@unionbankofindia.bank)

Somnath Panda 

AUTHORIZED OFFICER

MCL, BASUNDHARA AREA

SBI/HR 5202511405260265

4343573 J. SAMANTRAY  
SBI, BALINGA BRANCH  
14 NOV 2025  
CASH  
CANCELLED

8408769(S)  
SBI, BALINGA  
14 NOV  
4221  
Journal No.  
Checker ID No.



## Scheme

To undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of Mahanadi Coalfield Limited, Basundhara Area.



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

---

Compliance to Condition No 12 of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of Mahanadi Coalfield Limited, Basundhara Area District: Sundargarh, Odisha.

#### 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closure Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293 /2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 12 reads as follows.

"12. User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any located in the area within 100 meter from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to the MoEF & CC before final approval." This scheme is prepared to comply the condition no 12 of the in- principle approval orders as stated above.



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

## 2. Total mining area & Boundary description:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance 567.20 ha Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda Total Area		77.56	77.56	26.87	50.59	77.46	155.02
2	Basundhara		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulla		35.81	35.81	32.33	86.61	118.94	154.75
5	Sitabahal		68.55	68.55	1.21	27.22	28.43	96.98
6	Basundhara RF	88.25	0	88.25	109.20	353.74	462.94	88.25
		88.25	274.33	362.58	99.99	4.33	104.32	825.51
		0	0	0	209.19	358.07	567.26	104.32
		88.25	274.33	362.58				929.83
				(-)8.52				(-) 8.52
	F.Total			354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F. No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in-principle approval orders has been issued.

## 3. Objectives of the Scheme:

From the stipulated conditions of Stage-I orders as stated above the objectives have been derived as follows.

- To restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meter from outer perimeter of the mining lease.

The objectives will be achieved through

- (i) Gap planting,
- (ii) Soil & Moisture Conservation activities



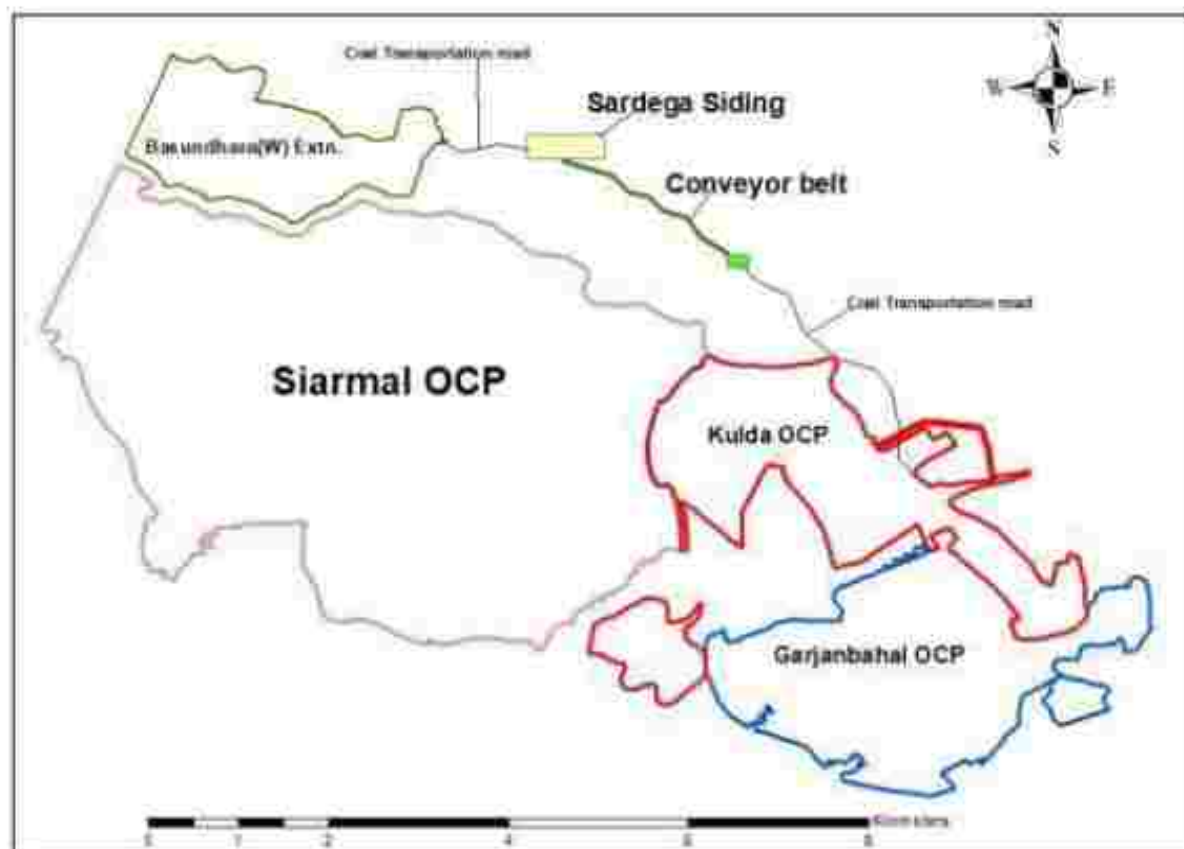
Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

The above activities will be implemented by User agency by himself or through the State Forest Department. It will be implemented at the project cost.

### 3.1 Boundary and Adjoining Mines:

The Kulda OCP is having other mines of Mahanadi Coalfield Limited in three sides as furnished below.

North	Basundhara East Block
South	Garjanbahal Coal Block
East:	No Coal Block, Basundhara nalla
West	Siarmal & Siarmal Extension





Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

Sl no	Khata No	Plot No	Total Area of the Plot in Ac	Area coming within 100m zone in Ac	
Village :Bankibahal			Cadastral Sheet No:		
1	57	15 370	8.97	3.11	Jungal (AJA)
2	57	393	75.06	9.25	Jungal (AJA)
3	57	398	6.70	2.19	Jungal (AJA)
4	57	402	22.65	3.39	Jungal (AJA)
5	57	406	5.90	0.895	Jungal (AJA)
6	57	414 S	8.18	1.47	Jungal (AJA)
7	57	<b>Total</b>	10.230	1.044	Jungal (AJA)
				<b>21.349</b>	
Village: Bailanga					
8	121	1	27.70	0.83	Patra Jungal (AJA)
9	121	11	9.60	5.15	Patra Jungal (AJA)
10	119	328	24.900	13.206	G. Jungal (Rakhita)
11		RF		9.31	Sidharmunda RF
		<b>S Total</b>		<b>28.496</b>	
		<b>G Total</b>		<b>49.845 = 20.172 ha</b>	

#### 4. Area under 100m from Kulda Mining Lease Boundary & kisam thereof:

The Cadastral Map 16"= 1 Mile pertaining to 100 m from the boundary line (Kulda OCP) has been examined. The following plots of forest kisam are coming within the 100m peripheral area. The plot wise details are as furnished below.

The area coming under Sidharmunda RF has already been provided for Compensatory afforestation purpose against Siarmal OCP of MCL against forest land to be diverted. The corresponding / relevant document is at Annexure-1

The area available for treatment is 49.845 Ac-9.31 Ac= 40.535 Ac= 16.405 ha

#### 5. Present Crop condition (area within 100m from Boundary)

The area coming within 100m from the boundary line in East direction bears a natural riparian vegetation. The crop is moist deciduous in nature. Sal, Asan, Arjun, Ailanthus, Jamun, Pani Gambhari (Tribia sp), Ficus sp are occurring on area coming within 100m zone



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

from boundary. There are also planted seedlings of Kadamba, Neem, Sana Chakunda, Acacia. Biotic interference is heavy. The crop density is about 0.2

#### 5. Proposal to enhance & juvenile the crop:

The area coming under 100m zone on eastern side of the Project (Kulda OCP) will be treated under three prong action plan i.e.

a) Silvicultural cleaning operation;

b) Planting of species mostly of Riverine succession Sisoo (*Dalbergia sisoo*, Simal (*Bombax Ceiba*), Chakunda (*Cassia siamea* / ***Senna siamea***) and ficus species. @ 500 plants per ha i.e. (ANR with gap planting @500 plants per ha)

c) Adequate SMC on river banks with assisting the naturally occurring seedlings / saplings).

#### 7. Operational details:

##### 7.1 Silvicultural cleaning operation:

The silvicultural cleaning is intended to achieve healthy growth of existing seedlings / saplings / coppice shoots of any species. The operation includes

- Cutting back of high stumps with preference to living stumps and having a good coppicing power.
- Cutting of climbers those are of annual nature and uprooting them wherever possible. The woody climbers those are interlocking the existing trees should not be cutback as it gives enforcement to trees.
- Singling out of multiple coppice shoots and retaining most promising ones.

##### 7.2 Planting of species associated with Sal Forest & post care operation:

Plantation of indigenous species matching with the local species is required to be planted following the cost norm of Plantations approved by Forest department.

The species suggested are

- (i) *Dalbergia sisoo* (sisoo);
- (ii) *Terminalia arjuna* (Arjun);
- (iii) *Syzygium cumini* (Jamun),
- (iv) *Bambusa nutan* / *Dendrocalamus Strictus* (Bamboo),



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

- (vii) *Cassia siamea* / *Senna siamea* (Sana Chakunda),
- Anthocephalus cadamba* (Kadamba) ;
- Bombax Ceiba* (Simil),
- (viii) *Anogeissus acuminata* (Fasi)

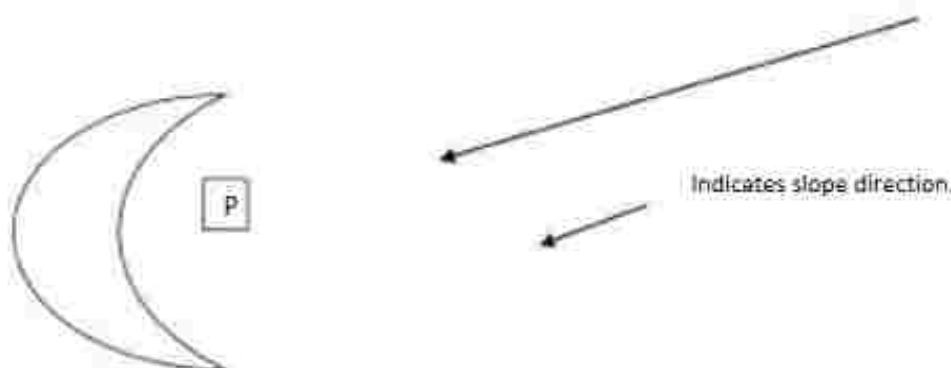
The detail steps of planting and post care as provided in the cost norm (ANR with gap planting @500 plants per ha) enclosed to be followed. (Annexure-II)

7.3 Adequate SMC on area coming within 100m Zone / Basundhara River banks with care to naturally occurring saplings.

The area coming in 100m zone is close to Basundhara River / nalla. Area displays a moderate slope towards Basundhara nala / rive. LBCD may be taken up along the contour. The natural seedlings available in the treatment area are to be given appropriate attention to ensure its establishment.

The following measures are prescribed.

- Deep Soil Working around the seedlings at a width of 0.50 m with application of fertilizer.
- Weeds to be removed / uprooted at a radius of 1 meter.
- In case of sloppy location Half Moon trench to be provided.



- T:Half Moon Trench
- P:Plant position.

Besides the provisions made in the cost norm for ANR with gap planting @500 plants per ha a sum of Rs 15000/- per ha is provided to intensify SMC activities as prescribed above.



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kuldā OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

### 8. Cost estimation:

Sl No	Work description	Unit	Rate	Quantum	Amount in Rs	Remark
1	Silvicultural Cleaning operation and gap planting @500 plants per ha ( ANR with gap Planting)	Ha	125323.65	16.405	2055934.50	Details of work plan as per approved cost norm
2	Add. SMC	Ha	15000/-	16.405	246075.00	
0	Total				2302009.50	
	Add 20% for cost-escalation				460401.90	
	Total				2762411.40 or say 27,52,412/-	

(Rupees Twenty Seven Lakh Sixty Two Thousand and Four Hundred Twelve Only)

### 9. Executing Agency:

The proposed activities will be implemented by the State Forest Department / Divisional Forest Officer, Sundargarh. The approved cost will be deposited in ODISHA CAMPA fund through parivesh web portal.

Encl: 100m Zone Map (Cadastral map), Documents in support of identification of Sidharmunda RF area for Compensatory afforestation purpose & Cost norm for ANR with gap planting @500 plants per ha.

General Manager,

Basundhara Area, MCL

Sundargarh

Project Officer  
Kuldā Opencast Project  
ମିଳିତାମା ଅଭିଯାନ  
ପ୍ରକଳ୍ପ ଅଧିକାରୀ

Divisional Forest Officer  
SUNDARGARH FOREST DIVISION

Technically Approved

Regional Chief Conservator of Forests  
Rourkela Circle



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

## Annexure-II

Cost Norm for ANR with gap planting @500 Plants per Hectare (18 months old seedlings)						
Wage Rate Rs. 462/- per Manday						
Sl. No.	Item of work	Preferable period of execution	Labour in Man days	Labour Cost (Rs)	Material Cost (Rs)	Total Cost in (Rs)
1	2	3	4	5	6	7
	0TH YEAR (Advance work)					
1	Survey, Demarcation and Pillar posting Preparation of Treatment Map (Digital Map)					924.00
2	Site Preparation (Cleaning & removal of debris)	Nov / Dec	1	462.00		462.00
3	Silvicultural operations including cutting of high stumps, singling out of multiple shoots, climber cutting, clearance of weeds & removal of debris from the fields to blank space	Jan / Feb	4	1848.00		1848.00
4	Alignment and Stacking	Jan / Feb	12	6720.00		6720.00
5	Digging of pits (45cm x 45cm x 45cm) /50cm diameter augur hole in hard & gravity soil	Feb / Mar	1	462.00		462.00
6	S. TOTAL	Feb / Mar	20	9240.00		9240.00
	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost				0.00	19656.00
7						982.80
	Total of the Yr 1st Year / Planting Year		40	19656.00	0.00	20638.80
	Fencing by using Bamboo Twigs & Thorns / Brushwood / any other Transportation of 18 months old seedlings by hired vehicle from the nursery including loading, unloading & stacking the same at planting site @Rs8/- per seedling (1760 nos) Average lead of 15 Rkm)					
1	Watering the poly pot seedlings at planting site		12.00	5544	2500.00	8044.00
2	Conveyance of poly pot seedlings on head load from the stacking site to individual dug out pits within the planting site; applying insecticide, fertilizers and planting after scooping the soil with other applied materials and pressing the soil properly around the planted seedlings (In organic manure is applied, bio pesticide should be used instead of insecticide)	Jul / Aug	0.00	0	4400.00	4400.00
3		Jul / Aug	1.00	462	0.00	462.00
4		Jul / Aug	12.50	5775	0.00	5775.00



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

5	Cost of Fertilizer & Insecticide					
a.	CMD/ Vermicompost/ Organic Manure as Basal Dose					
b	NPK @ 50 gms/plant as basal dose	Jul / Aug	0.00	0	4915.00	4915.00
c.	Insecticide/Bio-pesticide @ 5gms/plant					
d	Urea @ 30 gms per plant					
e	Jivamruta/ Herbal based plant growing products					
6	Casualty Replacement @10% (50 nos)	Jul/ Aug	1.50	693	0.00	693.00
7	1st weeding & Manuring (Application of Urea)	Aug / Sept	5.00	2310	0.00	2310.00
8	2nd Weeding, Soil working (1mt diameter around the plants ) and manuring	Sep/Oct	8.00	3696	0.00	3696.00
9	Fire line tracing (2mt wide fire line over 400m long ) including maintenance of inspection path	Feb / Mar	3.00	1386	0.00	1386.00
10	Watch & Ward against grazing and other Biotic interference	Aug / Mar	8.00	3696	0.00	3696.00
	<b>5. TOTAL</b>		<b>51</b>	<b>23562</b>	<b>11815.00</b>	<b>35377.0</b>
11	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost					1768.9
	Total of the Yr		51	23562	11815.00	37145.9
<b>2nd YEAR MAINTENANCE</b>						
1.	Transportation of 50 nos of 18 months old seedling by hired vehicle from Nursery to plantation site including loading, unloading @ Rs: 8/- per seedling (Average lead of 15 RKM)	Jul		0	0	400
2.	Casualty Replacement -10%	Jul	2	924		924.00
3.	Cost of Fertilizer & Insecticide					
	(a) Bio pesticide/ Insecticide @ 5 gms/ plant					
	(b) NPK/ Urea/ Herbal based plant growing product	July / Aug	0	0	1638	1638.00
4.	Weeding (Complete weeding) & Soil working (1mt diameter around plants) & Manuring (Application of NPK/Urea/ Herbal based plant growing product)	Sept / Oct	10	4620	0	4620.00
5.	Fire line tracing (3m wide fire line over 300mt long) including maintenance of inspection path	Feb / Mar	3	1386	0	1386.00



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

6	Watch & Ward against grazing and other Biotic interface, Repair & maintenance of fencing S. TOTAL	Apr-Mar	12	5544	0	5544.00
	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost		27	12474	2038	14512.00
7	Total of the Yr		0	0	0	725.60
	<b>3rd YEAR MAINTENANCE</b>		27	12474	2038	15237.60
1.	Cost of fertilizer (Urea/NPK/Bio-fertilizer/Vermicompost /Herbal based) plant growing product	Aug / Sept	0	0	1600	1600.0
2.	Weeding (Complete weeding), soil working (1mt diameter around the plants) and Manuring (Application NPK / Urea/ Herbal based plant growing product)	Sep/Oct	10	4620	0	4620.0
3.	Fire line tracing (3mt wide fire line over 300m long) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
4.	Watch & Ward against grazing & other biotic interference, repair & maintenance of fencing	Apr-Mar	12	5544	188	5732.0
	S. TOTAL		25	11550	1788.00	13338.0
5.	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost					666.9
	Total of the Yr		25	11550	1788.00	14004.9
	<b>4th YEAR MAINTENANCE</b>					
1.	Fire line tracing (3mt wide fire line over 300m long) including maintenance of inspection path	Feb/Mar	3	1386	0	1386.0
2.	Watch & Ward against grazing & other biotic interference, repair & maintenance of fencing	Apr-Mar	12	5544	0	5544.0
	S. TOTAL		15	6930	0.0	6930.0
3.	Monitoring, Evaluation, Documentation & Contingency i.e., 5% of the total Cost					346.5
	Total of the Yr		15.0	6930.0	0.0	7276.50
	<b>G. Total</b>					94303.65



Scheme to undertake Gap Planting and Soil & Moisture Conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100 meter from outer perimeter of the mining lease of Kulda OCP of MCL, Basundhara Area District: Sundargarh, Odisha.

Abstract (Year wise) including cost of seedlings

Year	No. Of Man days	Labour Cost @462/-	Material cost (Rs.)	Monitoring and Supervision @5% cost	Seedling cost@ 51.70	Total
0th						
1st	40	19656.00	0.00	982.80		20638.80
2nd	51	23562	11815.00	1768.85	28435.00	65580.85
3rd	27	12474	2038	725.60	2585.00	17822.60
4th	25	11550	1788.00	666.90		14004.90
	15	6930	0.0	346.50		7276.50
Grand Total		74172.00	15641.00	4490.65	31020.00	125323.65

**JOINT VERIFICATION OF FOREST LAND FOR COMPENSATORY AFFORESTATION IN FAVOUR OF BULDA DCP, MCL**

ANNEXURE-I

Division: Sundargarh

Range: Lephrispada

Forest Particular	Patch no.	Section	Beat	Area Identified for C.A. (in Ha.)
Sikajore A	1	Gundiadih	Halma	54.0
	2	Gundiadih	Halma	10.0
	3	Gundiadih	Halma	10.5
Sikajore West	1	Gundiadih	Halma	40.0

Range: Ujalpur

Forest Particular	Patch no.	Section	Beat	Area Identified for C.A. (in Ha.)
Tangalipali DPF	1	Ujalpur	Bupelabahal	14.0

Range: Gopalpur

Forest Block	Patch no.	Section	Beat	Area Identified for C.A. (in Ha.)
Pandipani RF	1	Gopalpur	Sarangjharla	64.50
Saharmunda RF	1	Gopalpur	Garijambahal	50.80
Punjapahar RF	1	Duduka	Duduka	37.70

1. Certified that land referred above of respective Range is having adequate soil depth suitable for plantation from management point of view.
2. Certified that land referred above of respective Range is free from encroachment and encumbrances.
3. Certified that land referred above of respective Range is not allotted previously.
4. Certified that land referred above of respective Range is not settled in favour of any individual/ community under E.L. Act, 2006
5. Certified that the above identified area of respective Range contains sparse vegetation with low diversity of forest growth and is fit for compensatory afforestation.

*[Signature]*  
**Forest Officer's Office**  
 Gopalpur Range

*[Signature]*  
**Range Officer**  
 BULDA DCP RANGE

*[Signature]*  
**Dr. Ranjan**  
 Range Officer

MAP 200000 1:50,000 AREA OF ALLIUM OPENCAST MINE PROJECT 20774, BY MCL IN RELIANCE SANDROWAN,  
SALIKOR AND FUTURE LATER VESCOR THINGS OF SANDROWAN DISTRICT, ODISHA,  
INDIA



SANDROWAN EAST (EXISTING)

ELDA OCP

SARNAK OCP

DARJABAHAL OCP

-  BOUNDARY OF VILLAGE
-  ZONE RESERVED AREA
-  MINE

10/10



## Scheme

For De-silting of existing village tanks and other Water bodies located within five km from the lease boundary of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area



Prepared by  
General Manager,  
Basundhara Area, Sundargarh, Odisha

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Compliance to Condition No 13 of "In Principle approval" orders for Online Proposal No FP/OR/MIN/50293/2020 dated 10.07.2025



## Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area

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### 1.0 Introduction:

Kulda mine is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closer Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 vide Proposal no FP/OR/ MIN / 50293/2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 13 reads as follows.

"13. The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co- ordinates located within five Km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User agency shall regularly undertake de-silting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks / water bodies. A detailed approved plan for de-silting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF&CC before Stage-II approval."

This scheme is prepared to comply the condition no 13 of the in-principle approval orders as stated above.



2. Total mining area & present land use pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	155.02
2	Bankibahal		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
5	Siarmal		68.55	68.55	1.21	27.22	28.43	96.98
6	Lamla RF	88.25	0	88.25	0	0	0	88.25
Total		88.25	274.33	362.58	109.20	353.74	462.94	825.51
Area outside the Lease		0	0	0	99.99	4.33	104.32	104.32
Total		88.25	274.33	362.58	209.19	358.07	567.26	929.83
Re-diverted Forest area				(-)8.52				(-) 8.52
G. Total				354.06	209.19			
						358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest Clearance has been obtained for 227.89 ha vide Order F.No 8-176/1997-FC 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in-principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	Infrastructure including Zone Safety and Embankment	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	External dump Total	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Redirected Washery for Total	227.895	406.315	634.210	134.69	160.93	295.62	929.83
5		(-)8.52	0	(-)8.52				
		219.375	406.315	625.69	134.69	160.93	295.62	921.305

### 3. Drainage pattern:

The mine is located in the Ib River catchment area. There is one tributary of Ib River i.e. Basundhara Nallah flowing just on the North – North East direction. There is also a Nallah namely Chattajore Nallah flowing within the ML area. This Nallah within the ML area has been straightened with due permission from the competent authority. It is being feed by rivulets and general runoff of the area. The location map of Basundhara Nallah and Chaturbhuj Nallah with diversion part is depicted below.

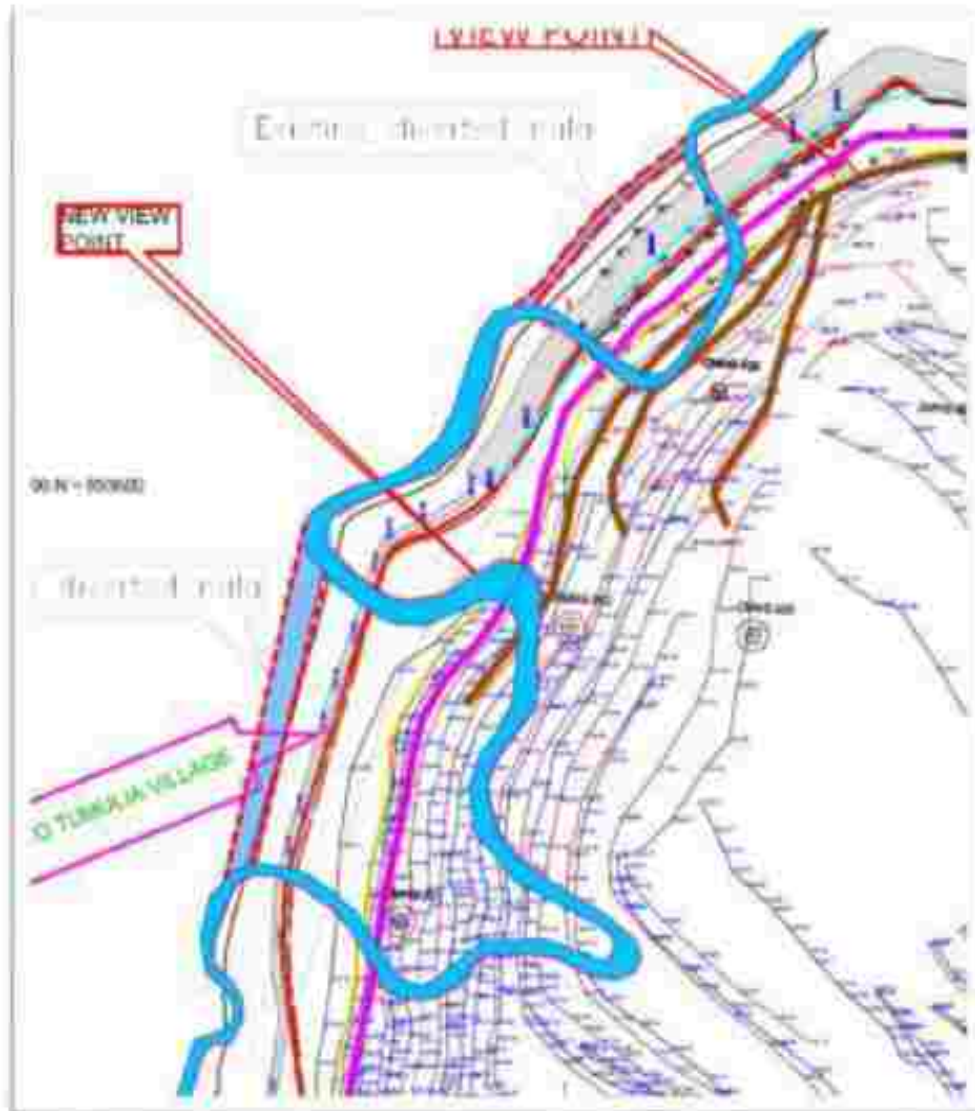


Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)





Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)



3.2 Rain fall pattern: The Hemgir area of Sundargarh district, like the rest of the district, experiences a sub-tropical climate with a distinct rainy season. The monsoon season, primarily influenced by the southwest monsoon, brings the majority of the rainfall, with July and August being the wettest months. The average annual rainfall for Sundargarh is around 1467.2 millimeters.



Most of the rainfall is during July to September. The rain fall during the other months mostly does not end in surface runoff.

#### 4. Catchment area of Basundhara Nallah:

The Basundhara Nallah, also known as Basundhara River, is located within the Ib River coalfield in Odisha, specifically within the Gopalpur Sector of the Chaturdhara block. The Chaturdhara block is situated in the northwestern central part of the Ib River coalfield. The Nallah flows from west to east, forming the northern boundary of the block and separating it from the Basundhara blocks. Several smaller tributaries and Nallahs crisscross the area, along with ponds and dug wells, which are used for irrigation and drinking water.

- Location: The Basundhara Nallah is part of the Ib River coalfield, specifically within the Chaturdhara block.
- Topography: The area is characterized by undulating terrain, with paddy fields being a dominant feature. The general altitude ranges from 260 to 311 meters.
- Drainage: The Basundhara Nallah flows from west to east, forming the northern boundary of the Chaturdhara block.
- Other Water Sources: Besides the Basundhara Nallah, the area also contains other Nallahs, ponds, and dug wells used for irrigation and drinking water.

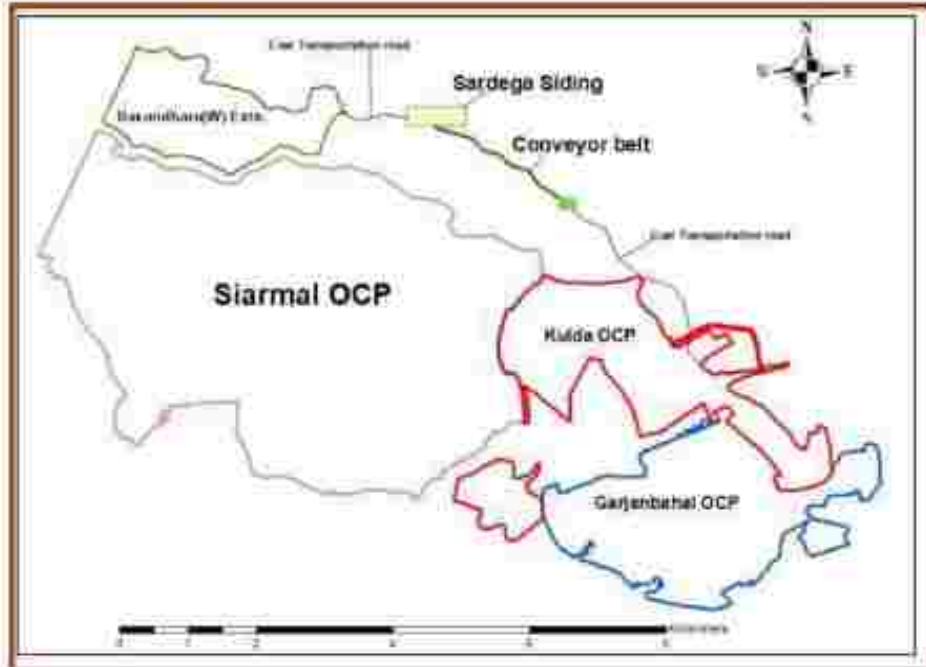
Surrounding Areas:

-



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)

The Chattajhor Nallah forms the eastern boundary, separating the block from the Kulda block. The Barjhor Nallah flows northwards through the middle of the block.

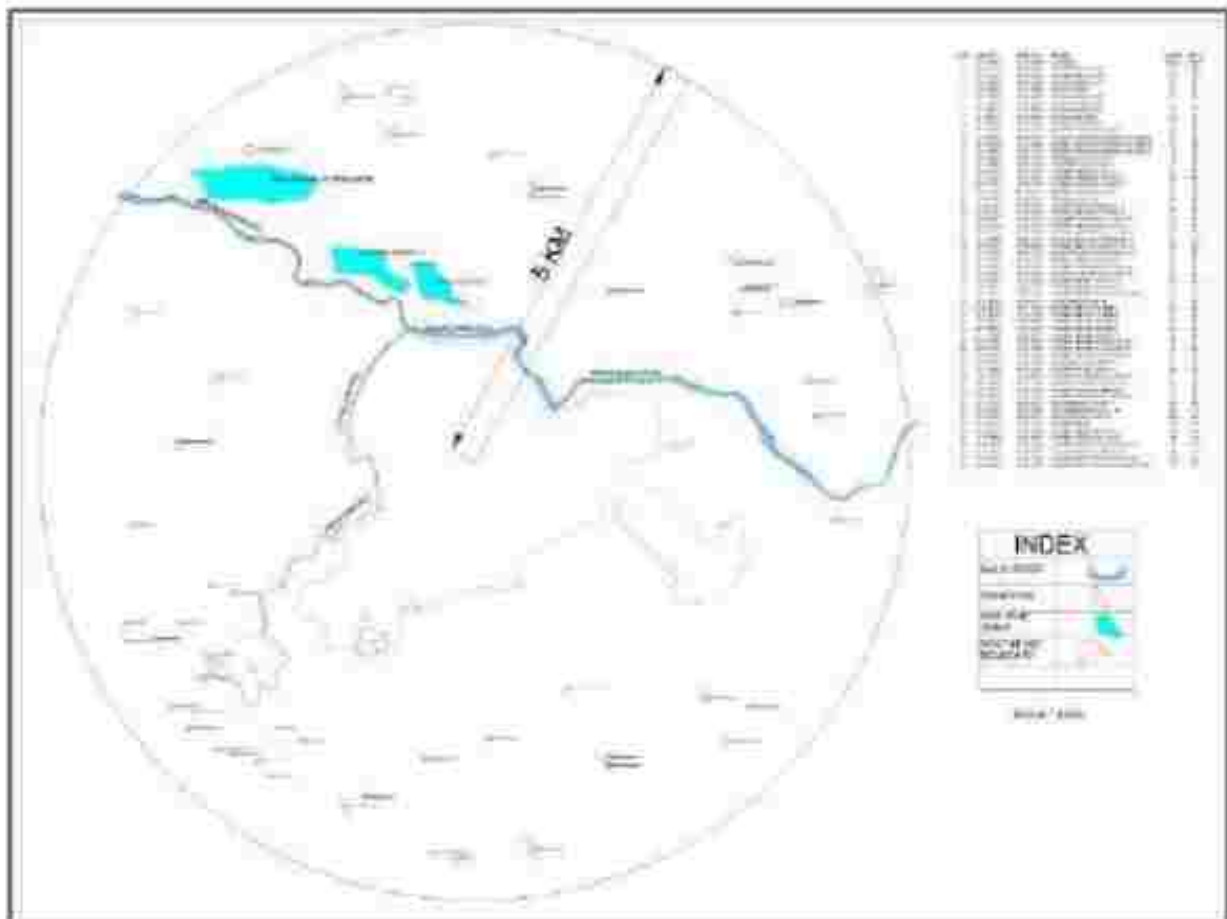




5. List of Village Ponds / water bodies situated within 5 km radius of the project boundary and selected for Di- silting program

The silting of water bodies in the Basundhara area of Mahanadi Coalfields Limited (MCL) is primarily due to coal mining activities and their associated impacts on the environment. During rainy season lot of silt, clay, coal dust are being running water and village tanks / water bodies are being silted up resulting reduced water holding capacity.

As per the directives contained in Stipulated Condition no 13 of the in- principle approval orders, the water bodies / village ponds situated within 5 km radius from the lease boundary of Kulda OCP has been studied and listed below.





Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)

List of Village Ponds / water bodies situated within 5 km radius of the project boundary and selected for Di- silting program

Sl. No.	Latitude	Longitude	Land mark	Length (in m)	Width (in m)
1 2	22° 1'066"N	83° 42' 044"E	Near Gaddwar Village	54	58
3 4	22° 1'060"N	83° 41'870"E	Near Gaddwar Village	40	34
5 6	22° 0' 510"N	83° 42' 860"E	Near Kund Village 9	35	33
7 8	22° 0'425"N	83° 43'009"E	Near Kund Village 10	63	50
9	22° 0' 308"N	83° 42'716"E	Pond Near Kund Village 16	81	34
10	22° 0' 201"N	83° 42'794"E	Pond Near Kund Village 17	26	45
11	22° 0'065"N	83° 43' 422"E	Pond Near Sahaspur Village 19	50	43
12	22° 59'722"N	83° 43'880"E	Pond in Sahaspur Village 22	52	54
13	22° 0'643"N	83° 45' 707"E	Pond Near Garjanbahal Village 26	90	90
14	22° 0'714"N	83° 44'780"E	Pond Near Karlikachhar Village 28	63	52
15	22° 1'728"N	83° 46'592"E	Pond Near Barpali Village 30	64	69
	22° 2'896"N	83° 47'016"E	Pond Near Barpali Railway Station	35 72	32
	22° 3'157"N	83° 46'008"E			75
	22° 1'348"N	83° 42'574"E	Pond Near Kusara Village 39	75	55
			Prajapada Village Pond 45	55	40
	22° 3'167"N	83° 45'126"E	Pond Near Narasingpur Village 50	60	

(NB: Besides the above listed Village ponds there are Minor Irrigation Projects and Nallah within 5 km radius but not possible to take of di-silting activities due to its vastness.)

#### 6.0 Activities to be taken up:

The following activities will be taken up during di-siltation process.

- i. Work will be executed in 2 cycles i.e. each water body will be di- silted once in 5 years.
- ii. 60% of the Pond surface area will be taken up for de-siltation ( this is due to side slope – Trapezoid shape of the pond cross section
- iii. In 1st Cycle silt of 1m depth will be removed and silt will be used for strengthening of the embankment.
- iv. The embankment will be thoroughly compacted and grass surfing will be done to avoid washing of silt again to the water body / pond,



- v. One Bathing Ghats per pond will be provided. In case of existing bathing Ghats, it will be repaired for using by public,
- vi. Inlet & outlet pipes (PVC or Cement Pipes) will be provided taking natural water flow of the locality / surroundings,
- vii. 4 trees on four sides preferable Aswatha (*Ficus religiosa*) will be planted with Gabion for its protection.
- viii. A sign board will be placed indicating the year of de-silting any executing agency.
- ix. In 2nd Cycle, the depth of silt to be removed will depend upon accumulation of silt during preceding five years but not less than 75cm (0.75m)
- x. Repair to Bathing Ghats / embankment will be taken up.
- xi. To remove turbidity – if required- a coagulant like Lime / Alum may be added in moth of November / April so as to make it useable by Public & animals.

#### 7.0 Quantum of Earth work required.

Sl No	Landmark	Size LxB m2 (A)	Effective area for de-silting ( 60% of (A)	Earth work in m3	
				1st Cycle (@1m depth)	2nd Cycle (@ 0.75m Depth)
1	Near Gaddwar Village	54*58	1879	1879	1409
2	Near Gaddwar Village	40*34	816	816	612
3	Near Kund Village 9	35*33	693	693	520
4	Near Kund Village 10	63*50	1890	1890	1418
5	Pond Near Kund Village 16 Pond Near Kund	81*34	1652	1652	1239
6	Village 17 Pond Near Sahaspur	26*45	702	702	527
7	Village 19 Pond in Sahaspur	50*43	1290	1290	968
8	Village 22 Pond Near Garjanbahal	52*54	1685	1685	1264
9	Village 26 Pond Near	90*90	4860	4860	3645
10	Kartikachhar Village 28	63*52	1966	1966	1475



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)

11	Pond Near Barpali Village 30	64*69	2650	2650	1988
12	Pond Near Barpali Railway Station 35	72*32	1382	1382	1037
13	Pond Near Kusara Village 39	75*75	3375	3375	2531
14	Prajapada Village Pond 45	55*55	1815	1815	1361
15	Pond Near Narasingpur Village 50	60*40	1440	1440	1080
<b>Total</b>			<b>28095</b>	<b>28095</b>	<b>21074</b>

7.1 Cost Estimation.

The di-silting work will be taken up mechanically by using JCB etc. If any villagers / labours of the same village can be engaged if possible. The rate for 1cum of Earth work is Rs227.67 For Earth Work Estimation.

Sl No	Landmark	Earth work		Rate Rs227.67	Financial projection (in Rs)	
		1st Cycle	2nd		1st Cycle	2nd
					185779	157275
					427792	430296
1	Near Gaddwar Village Near	1879	Cycle	227.67	376111	159824
2	Gaddwar Village Near Kund	816 693	1409 612	227.67	293694	320787
3	Village 9 Near Kund Village	1890	520 1418	227.67		139334
4	10 Pond Near Kund Village	1652	1239 527	227.67		118388
5	15 Pond Near Kund Village	702	968	227.67		322836
6	17 Pond Near Sahaspur	1290		227.67		282083
7	Village 19			227.67		119982 220385
8	Pond in Sahaspur Village 22	1685	1264	227.67	383624	287775
9	Pond Near Garjanbahal Village 26	4860	3645	227.67	1106476	829857
10	Pond Near Karlikachhar Village 28	1966	1475	227.67	447599	335813



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kulda OCP (Extension)

11	Pond Near Barpali Village 30	2650	1988	227.67	603326	452608
12	Pond Near Barpali Railway Station 35	1382	1037	227.67	314640	236094
13	Pond Near Kusara Village 39	3375	2531	227.67	768386	576233
14	Prajapada Village Pond 45	1815	1361	227.67	413221	309859
15	Pond Near Narasingpur Village 50	1440	1080	227.67	327845	245884
	Total	28095	21074	227.67	6396388	4797918

For other activities the following cost norm will be followed.

- compacting the embankment an amount of Rs 10/- per Cum
- and for construction of Bathing Ghat, fixing of inlet / outlet pipe of 60cm dia PVC or RCC Cement pipe, maintenance & Grass surfing, planting of Ficus Spe – 4 numbers etc = Rs 2.00 lakhs per village tank in 1st Cycle
- For maintenance / Repair of embankment etc Rs 1.50 lakh in 2nd cycle



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kuida OCP (Extension)

### 7.2 Village tank wise financial requirement:

Sl No	Landmark	Financial projection							
		1st Cycle				2nd Cycle			
		Earth work	compacting of embankment	Others	Total	Earth work	compacting of embankment	Others	Total
1	Near Gaddwar Village	427792	18790 8160	200000	646582	320787	14090 6120	150000	484877
2	Near Gaddwar Village	185779	6930 18900	200000	393939	139334	5200 14180	150000	295454
3	Near Kund Village 9	157775	16520	200000	364705	118388	12390	150000	273588
4	Near Kund Village 10	430296		200000	649196	322836		150000	487016
5	Pond Near Kund Village 15 Pond Near Kund Village 17	376111		200000	592631	282083		150000	444473
6	Village 17 Pond Near Sahaspur	159824	7020	200000	366844	119982	5270	150000	275252
7	Village 19	293694	12900	200000	506594	220385	9680	150000	380065
8	Pond in Sahaspur Village 22	303624	16850	200000	600474	287775	12640	150000	450415
9	Pond Near Garjanbahal Village 26	1106476	48600	200000	1355076	829857	36450	150000	1016307
10	Pond Near Karlikachhar Village 28	447599	19660	200000	667259	335813	14750	150000	500563
11	Pond Near Barpali Village 30	603326	26500	200000	829826	452608	19880	150000	622488
12	Pond Near Barpali Railway Station 35	314640	13820	200000	528460	236094	10370	150000	396464



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kuida OCP (Extension)

13	Pond Near Kusara Village 39	768366	33750	200000	1002136	576233	25310	150000	751543	
14	Prajapada Village Pond 45	413221	18150	200000	631371	309859	13610	150000	473469	
15	Pond Near Narasingpur Village 50	327845	14400	200000	542245	245884	10800	150000	406684	
Total		6396388	280950	3000000	9677338	4797918	210740	2250000	7258658	
1st Cycle						2nd Cycle				



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kollia OCP (Extension)

### 7.3 Abstract Financial Estimation:

Sl No	Work Description	Unit	Rate	Quantum	Amount in Rs	Remark
1	De-silting of 15 tanks	Cum	227.67	28095	6396388.0	1 <sup>st</sup> Cycle
2	Compacting of Earth on Embankment	cum	10/-	28095	280950.0	
3	Other Expenditure Construction of Bathing Ghat, Grass surfing, fixing inlet / outlet pipes and Planting trees.	No	200000	15	3000000.0	
	<b>Sub Total (1<sup>st</sup> cycle)</b>				<b>9677338.0</b>	
4	De-silting of 15 tanks	Cum	227.67	21074	4797918.0	2 <sup>nd</sup> Cycle
5	Compacting of Earth on Embankment	cum	10/-	21074	210740.0	
6	Other Expenditure Repair of Bathing Ghat, Grass surfing, maintenance	No	150000	15	2250000.0	
	<b>5 Total</b>				<b>7258658.0</b>	
	Total (1 <sup>st</sup> & 2 <sup>nd</sup> Cycle)				16935996.00	
	Add 20% for cost escalation				3387199.00	
	<b>6, total</b>				<b>20323195.00</b>	

(Rupees Two Crore Three Lakh Twenty Three Thousand One Hundred & Ninety Five Only)

Technically Approved

Regional Chief Conservator of Forests  
Bijurkella Circle



Scheme for De-silting of existing village tanks and other Water bodies located within 5km from the lease boundary of Kuida OCP (Extension)

#### 8. Phasing of work (Work calendar)

No	Location	26-27	27-28	28-29	29-30	30-31	31-32	33-34	34-35	35-36	36-37
1	Near Gaddwar Village										
2	Near Gaddwar Village										
3	Near Kund Village 9										
4	Near Kund Village 10										
5	Pond Near Kund Village 16										
6	Pond Near Kund Village 17										
7	Pond Near Sahaspur Village 19										
8	Pond In Sahaspur Village 22										
9	Pond Near Garjambahal Village 26										
10	Pond Near Karlikachhar Village 28										
11	Pond Near Barpali Village 30										
12	Pond Near Barpali Railway Station 35										
13	Pond Near Kusara Village 39										
14	Prajapada Village Pond 45										
15	Pond Near Narasingpur Village 50										



Scheme for De-silting of existing village tanks and other Water bodies located within Sira from the lease boundary of Kuida DCP (Extension)

**9. Executing agency:**

This project of De-siltation of Village tank will be carried out by the user agency either by himself or by outsourcing under their overall supervision.

**10. Inspection and Monitoring.**

The manner of execution & periodical monitoring will be made by the MCL authority. The Execution and achievements may be reviewed by the Divisional Forest Officer, Sundargarh from time to time as possible. In case of some dispute if the earmarked tank could not be de-silted in assigned year it may be executed in the next year along with the next year's programme. If it will not be possible in the subsequent year then the site may be changed on approval of DFO, Sundargarh.

Encl: Analysis of rate for Earth work as per PWD rate Odisha wage rate @ Rs462/- Per day

*AM*  
25/01/2025  
General Manager,  
Basundhara Area, MCL  
Sundargarh  
Project Officer  
Kuida Openat Project  
ପରିଚାଳନା ଅଧିକାରୀ  
କୂଳା ଓପେନାଟ

*[Signature]*  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



Analysis of rate for Earth work as per PWD rate Odisha wage rate @  
Rs462/- Per day

Sl No	Description of Work	MD Required	Amount @Rs462/-
1	Earth work in slushy soil (in Man water upto 0.6m depth requiring the aid of pans and vessels) within 50m. Initial lead and 1.5m initial lift as per the direction and specification of the Department.	Mulia 21 No	9702/-
		Woman Mulia 23 no	10626/-
		S. Total	20328.00
2	Overhead Charges 10%		2032.80
3	Sundries 2% Total Rate for 100 cum Rate per		406.56
	cum		22767.36
			22767.36
			Rs227.67





Government of India  
Ministry of Environment, Forest and Climate Change  
IA Division  
(Coal Mining)

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Minutes of AGENDA FOR 35TH MEETING OF EXPERT APPRAISAL COMMITTEE (COAL MINING SECTOR), SCHEDULED TO BE HELD ON 17-18TH NOVEMBER 2025, THROUGH PHYSICAL MODE meeting Coal Mining held from 17/11/2025 to 18/11/2025 Date: 27/11/2025

MoM ID:	EC/MOM/EAC/407009/11/2025		
Agenda ID:	EC/AGENDA/EAC/407009/11/2025		
Meeting Venue:	INDUS & NARMADA HALL		
Meeting Mode:	Physical		
Date & Time:			
	17/11/2025	10:30 AM	05:30 PM
	18/11/2025	10:30 AM	05:30 PM

1. Opening remarks

SUMMARY RECORD OF THE THIRTY FIFTH (35<sup>TH</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) HELD ON 17<sup>TH</sup> - 18<sup>TH</sup> NOVEMBER 2025 FOR ENVIRONMENT APPRAISAL OF COAL MINING SECTOR PROJECTS THROUGH PHYSICAL MODE.

17<sup>TH</sup> NOVEMBER 2025 [THURSDAY]

At the outset, Shri. Inder Pal Singh Matharu (I.F.S Retd.) welcomed the Expert members & other participants and requested to start the proceeding as per the agenda listed for this meeting. The list of members who participated in the meeting is at Annexure - III.

[The main PDF of MoM is enclosed at Page no. 335 - 493]

2. Confirmation of the minutes of previous meeting

Confirmation	of	the	minutes	of	the
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2.	Proposal to use LNG/CNG /Others (electric) based transportation trucks. In house study to reduce the carbon footprint for washery should be provided
3.	Plan to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.
4.	Detailed plan to tap renewable energy within the washery to be provided
5.	A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided. Corporate Environment Responsibility: a) The Company must have a well laid down Environment Policy approved by the Board of Directors. b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/ violation of the environmental or forest norms/conditions. c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished. d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large. e) Environment Management Cell and its responsibilities to be clearly spell out in EIA/ EMP report
<b>Miscellaneous</b>	
1.	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes
2.	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (IAGL / MoEF & CC certification)
3.	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapter's section
4.	Detailed Chronology of the project starting from the Land acquired, CTO /CTB with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the regulations respectively.

### 3.4. Agenda Item No 4:

#### 3.4.1. Details of the proposal

<b>KULDA EXPANSION OPENCAST PROJECT (21 Mt) by MAHANADI COALFIELDS LIMITED located at SUND ARGARH, ODISHA</b>			
<b>Proposal For:</b>		<b>Expansion EC</b>	
<b>Proposal No</b>	<b>File No</b>	<b>Submission Date</b>	<b>Activity Sub-Activity (Schedule Item)</b>
JAOB/CMIN/555625/2025	J-11015/10/1995-IA-II (M)	30/10/2025	Mining of minerals Coal Mining - Opencast (1(a))

### 3.4.2. Project Salient Features

#### Agenda No. 35.4:

**35.4: Kulda Expansion Opencast Project** (having production capacity of 21 MTPA with increase in the ML area from 634.205 Ha to 921.305 Ha) by M/s Mahanadi Coalfields Limited, located at villages: Balinga, Tumulia, Siarnal, Kulda & Bankibahal; Tehsil: Himgir, District: Sundargarh; State: Odisha - Environment Clearance - reg.

[Online Proposal No. IA/OR/CMIN/555625/2025; Consultant: CMPDI- NABET/EIA/25-28/RA 0142 valid till 08/11/2028]

Details of the proposal as ascertained from the proposal documents and as revealed from the discussions held during the meeting are given as under:

35.4.2: Details of previous approvals in chronological order: PP submitted the following details of the previous approvals:

S. No.	Details of Letter No.	EC/Expansion E C/Amendment in EC/ Validity Extension of E	Capacity in (MTPA)	Area in Ha	Date	Status of Implementation
1.	J/11015/10/95-4A.1 (M)	EC	19.60	678.25	24/12/2002	Implemented
2.	J-11015/10/1995-4A.1 (IM)	Expansion EC	14.00 (EC validity for one year)	634.205	22/03/2018	
3.	J-11015/10/1995-4A.1 (IM)	EC validity extension	14.00 (EC validity for one year)	634.205	28/03/2019	
4.	J-11015/10/1995-4A.1 (M)	EC validity extension	14.00 (Extension/ continuation of EC for 30 years or life of the mine whichever is earlier)	634.205	10/01/2020	
5.	J-11015/10/1995-4A.1 (M)	Expansion EC (20%)	19.60 (under 7(i) clause of EIA Notification, 2006 (Ministry OM dtd. 15 <sup>th</sup> September 2017))	634.205	02/03/2021	
6.	J-11015/10/1995-4A.1 (M)	Expansion EC (40%)	19.60 (under 7(i) clause of EIA Notification, 2006 (Minist	634.205	14/02/2022	

S. No.	Details of Letter No.	EC/Expansion EC/Amendment in EC/ Validity Extension of EC	Capacity in (MTPA)	Area in Ha	Date	Status of implementation
			ry OM dtd. 15 <sup>th</sup> September 2017))			
7.	<u>J-11015/10/1995-1A-BIM</u>	*Expansion EC (50%)	21.00 (under 7(i) clause of EIA Notification, 2006 (Ministry OM dtd. 7 <sup>th</sup> May 2022)	634.205	24/05/2022	
8.	<u>J-11015/10/1995-1A-BIM</u>	Amendment in EC	21.00	634.205	09/01/2023	
9.	<u>J-11015/10/1995-1A-BIM</u>	Amendment in EC	21.00 (Amendment in EC)	634.205	05/01/2024	
10.	<u>J-11015/10/1995-1A-BIM</u>	Amendment in EC	21.00 (Amendment in EC)	634.205	21/02/2025	
<p>Note* - The regularization of EC accorded vide letter dated 24/09/2022 as per the provisions of Ministry's OM dated 07.05.2022 has been appraised in the SAC, viz. 34<sup>th</sup> SAC meeting held on 29-30<sup>th</sup> October 2025 and the same has been recommended.</p>						

**35.4.3: Production details of the existing EC:** W.T.1 the previous approval. FP submitted the actual production details of the concerned mine and submitted that the mine became operational from 2007-08 onwards. CTO renewal has been obtained from the SPCB and the existing CTO is valid up to 31.03.2026. Details of the same are as follows:

Year	EC sanctioned capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity
2007-08	10.0	0.15	--
2008-09	10.0	2.47	--
2009-10	10.0	3.43	--
2010-11	10.0	5.02	--
2011-12	10.0	5.54	--
2012-13	10.0	5.50	--
2013-14	10.0	5.27	--

Year	EC sanctioned capacity (MTPA)	Actual Production (MTPA)	Excess production beyond the EC sanctioned capacity
2014-15	10.0	4.80	--
2015-16	10.0	8.02	--
2016-17	10.0	10.00	--
2017-18	14.0	10.07	--
2018-19	14.00	12.81	--
2019-20	14.00	13.62	--
2020-21	16.80	15.73	--
2021-22	19.60	18.49	--
2022-23	21.00	21.00	--
2023-24	21.00	21.00	--
2024-25	21.00	21.00	--

**35.4.4: Certified Compliance Report:** The project was inspected by the RO, MoEF&CC, Bhubaneswar on 16.05.2025 and CCR was issued vide letter no. 101-1014/2023/EPE dtd. 10.07.2025. Action taken report of the issued CCR dtd. 10.07.2025 was submitted by the project proponent on 09.08.2025.

**Compliance to the observations of the CCR vide no. 101-1014/2023/EPE dtd. 10.07.2025**

S. No.	Partially complied / Non-compliance details	Observation of RO (as bridged)	EC sanctioned	Sl. No.	Response of PP for the complied/being complied conditions
1	Ambient Air Quality	Installation of A/C along	20	5	Complied PP has installed total 05 nos. of CAQMS along the coal Transportation

reports to the Regional Office along with the six-monthly compliance reports.

22. The capital cost of the existing project is Rs. 622.21 Crores and Capital Cost for implementing EMP is Rs. 1349.08 Lakhs, while the recurring cost of implementing EMP is Rs. 512.70 Lakhs. The same shall be implemented in a time bound manner effectively and the compliance of the same shall be submitted to the Ministry's RO along with the six-monthly compliance report.

23. Committee deliberated on the details of plantation and observed that, the plantation will be carried out in a total of 633.59 Ha. by the end of mine life. Total plantation carried out till 31.03.2025 is in 118.918 Ha. of the ML area. Remaining is proposed to be completed by the end of the mine life in progressive manner. A 7.5 m. wide greenbelt, consisting of at least 3 tiers around mine boundary will be developed as greenbelt/ cover as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 9,04,028 saplings will be planted and nurtured in 633.59 hectares in 08 years (balance life of mine + Post closure period). Committee also deliberated on the drone video played during the meeting and found the plantation to be inadequate. Committee opined that the plantation on the OB dumps shall be done with the native species.

**Recommendations of the Committee**

35.4.22: In view of the foregoing and after the detailed deliberation, the Committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2005 subject to the stipulation of following specific conditions and general conditions based on project specific requirements and uploading of written submissions.

**3.4.5. Recommendation of EAC**

Recommended (Subject to submission of requisite information/ documents)

**3.4.6. Details of Environment Conditions**

**3.4.6.1. Specific**

Specific Conditions													
1.	The forestland of 134.69 Ha on which stage - I forest clearance has been accorded shall not be disturbed until the stage - II forest clearance is accorded for the same as per the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.												
2.	Project proponent shall comply with all the conditions prescribed by the SPCB in its comments received vide letter no. 20019/ND-II-CTE-MISC-398 dated 11.11.2025.												
3.	Project proponent shall provide the alternate grazing land in place of the 28.68 Ha. of grazing land is involved in the said project, as per the rules of the State Government.												
4.	The Wildlife Conservation Plan for the Kulda Expansion Project shall be implemented in a time bound manner.												
5.	Project proponent shall comply with the non-conformities as mentioned in the certified compliance report as per the action plan given below:												
	<table border="1"> <thead> <tr> <th>S.</th> <th>Activities under partially complied conditions</th> <th>Timelines</th> <th>Budget</th> <th>Whether</th> <th>Whether</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.	Activities under partially complied conditions	Timelines	Budget	Whether	Whether						
S.	Activities under partially complied conditions	Timelines	Budget	Whether	Whether								

**FOREST PILLAR DETAILS WITH CO-ORDINATES & DISTANCE**  
**KULDA OCP, BASUNDHARA AREA, MCL**

SL NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
17	75	782852.65	2439212.24	782777.48	2439068.21	162
16		782851.95	2439216.46	782852.65	2439212.24	4
15		782833.96	2439223.87	782851.95	2439216.46	19
14		782816.81	2439229.27	782833.96	2439223.87	18
13		782789.48	2439231.18	782816.81	2439229.27	26
12		782760.93	2439236.25	782789.48	2439231.18	20
11		782774.80	2439272.55	782760.93	2439236.25	26
10		782797.96	2439268.47	782774.80	2439272.55	25
9		782823.79	2439266.92	782797.96	2439268.47	26
8		782844.15	2439271.08	782823.79	2439266.92	20
7		782839.77	2439276.87	782844.15	2439271.08	7
6		782847.07	2439285.97	782839.77	2439276.87	11
5		782831.25	2439306.40	782847.07	2439285.97	26
4		782815.64	2439324.07	782831.25	2439306.40	24
3		782837.12	2439341.64	782815.64	2439324.07	28
2		782828.66	2439348.62	782837.12	2439341.64	10
1		782837.73	2439366.30	782828.66	2439348.62	20
42		782792.99	2439377.91	782837.73	2439366.30	46
41		782778.18	2439356.29	782792.99	2439377.91	16
40		782770.11	2439351.66	782778.18	2439356.29	10
39		782751.19	2439346.37	782770.11	2439351.66	20
38		782719.97	2439326.26	782751.19	2439346.37	38
36		782691.02	2439146.65	782719.97	2439326.26	182
49		782667.99	2439016.70	782691.02	2439146.65	132
35		782752.66	2438985.82	782667.99	2439016.70	90
34		782796.77	2438984.93	782752.66	2438985.82	4
33		782761.05	2439008.58	782796.77	2438984.93	24
32		782779.49	2439025.66	782761.05	2439008.58	15
31		782768.48	2439048.20	782779.49	2439025.66	25
30	782763.19	2439057.02	782768.48	2439048.20	9	
29	782777.48	2439068.21	782763.19	2439057.02	18	

SL NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
3	72	782837.73	2439366.30	782792.99	2439377.91	46
48		782805.54	2439436.52	782837.73	2439366.30	78
47		782804.35	2439465.50	782805.54	2439436.52	30
52		782805.80	2439473.12	782804.35	2439465.50	6
51		782741.37	2439457.82	782805.80	2439473.12	60
50		782737.31	2439441.04	782741.37	2439457.82	18
46		782756.63	2439439.34	782737.31	2439441.04	20
45		782778.38	2439435.21	782756.63	2439439.34	20
44		782770.92	2439424.74	782778.38	2439435.21	12
43		782772.35	2439410.93	782770.92	2439424.74	14
53		782781.03	2439392.87	782772.35	2439410.93	20
42		782792.99	2439377.91	782781.03	2439392.87	20

SL NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
21	82	782873.67	2439141.39	782852.65	2439212.24	74
20		782889.07	2439175.29	782873.67	2439141.39	38
19		782891.53	2439205.77	782889.07	2439175.29	30
18		782880.82	2439205.92	782891.53	2439205.77	11
17		782852.65	2439212.24	782880.82	2439205.92	28

SL NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
29	83	782777.48	2439068.21	782873.67	2439141.39	120
28		782786.50	2439070.53	782777.48	2439068.21	30
27		782805.42	2439081.23	782786.50	2439070.53	20
26		782827.99	2439100.27	782805.42	2439081.23	29
25		782836.14	2439099.63	782827.99	2439100.27	8
24		782840.48	2439090.00	782836.14	2439099.63	10
23		782847.04	2439091.59	782840.48	2439090.00	6
22		782855.45	2439100.62	782847.04	2439091.59	12
37		782868.14	2439126.24	782855.45	2439100.62	28
21		782873.67	2439141.39	782868.14	2439126.24	16

SL NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
14		781728.49	2438965.82	781723.57	2438965.03	4.99
13		781723.57	2438954.07	781728.49	2438965.82	12.74
12		781706.90	2438933.75	781723.57	2438954.07	26.82

Project Office  
Kulda OCP

11	57	781708.36	2438927.25	781706.90	2438933.75	6.99
10		781692.77	2438925.66	781704.36	2438927.25	11.68
9		781690.30	2438894.19	781692.77	2438925.66	31.58
8		781696.26	2438894.54	781690.30	2438894.19	5.97
7		781707.53	2438896.61	781696.26	2438894.54	11.46
6		781726.26	2438902.16	781707.53	2438896.61	19.54
5		781751.51	2438898.04	781726.26	2438902.16	25.58
4		781752.62	2438909.47	781751.51	2438898.04	11.49
3		781757.54	2438909.78	781752.62	2438909.47	4.92
2		781765.32	2438906.77	781757.54	2438909.78	8.34
1		781771.67	2438928.20	781765.32	2438906.77	22.36
17		781770.56	2438954.07	781771.67	2438928.20	25.9
16		781751.51	2438958.84	781770.56	2438954.07	19.65
15		781733.41	2438965.03	781751.51	2438958.84	19.13

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
26	64	781743.32	2438856.52	781766.60	2438851.36	23.85
25		781740.43	2438827.79	781743.32	2438856.52	28.88
24		781751.39	2438812.20	781740.43	2438827.79	19.06
23		781762.37	2438809.16	781751.39	2438812.20	11.4
22		781768.98	2438815.25	781762.37	2438809.16	8.99
21		781773.61	2438824.51	781768.98	2438815.25	10.36
20		781777.32	2438837.21	781773.61	2438824.51	13.23
19		781777.71	2438847.39	781777.32	2438837.21	10.2
18		781766.60	2438851.36	781777.71	2438847.39	11.8

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
108	381	781675.20	2438748.32	781684.67	2438748.46	8.48
107		781684.50	2438714.08	781675.20	2438748.32	35.23
106		781696.71	2438677.81	781684.50	2438714.08	38.28
105		781701.99	2438637.68	781696.71	2438677.81	40.49
104		781746.58	2438721.47	781701.99	2438637.68	94.93
113		781746.72	2438728.61	781746.58	2438721.47	7.15
112		781726.08	2438732.45	781746.72	2438728.61	20.99
111		781733.25	2438752.56	781726.08	2438732.45	23.85
110		781700.15	2438751.76	781733.25	2438752.56	13.12
109		781684.67	2438748.46	781700.15	2438751.76	15.83

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
101	379	781743.93	2438694.55	781745.65	2438690.19	4.71
100		781740.49	2438691.91	781743.93	2438694.55	4.34
99		781708.69	2438634.50	781740.49	2438691.91	65.63
98		781742.99	2438634.94	781708.69	2438634.50	41.29
103		781746.05	2438672.59	781742.99	2438634.94	37.86
102		781745.65	2438690.19	781746.05	2438672.59	17.59

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
82	374	781815.81	2438725.57	781807.98	2438658.56	67.47
93		781805.49	2438729.70	781815.81	2438725.57	11.11
92		781794.22	2438721.45	781805.49	2438729.70	13.97
91		781784.85	2438716.84	781794.22	2438721.45	10.44
90		781777.23	2438714.46	781784.85	2438716.84	7.98
89		781768.82	2438713.99	781777.23	2438714.46	8.43
88		781756.91	2438718.27	781768.82	2438713.99	12.65
87		781754.69	2438683.66	781756.91	2438718.27	34.69
86		781761.00	2438635.24	781754.69	2438683.66	48.83
85		781783.90	2438634.93	781761.00	2438635.24	22.91
84		781803.58	2438651.28	781783.90	2438634.93	25.59
83		781807.98	2438658.56	781803.58	2438651.28	8.5

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
32	283	782594.05	2439336.08	782590.38	2439304.76	31.54
31		782596.88	2439350.18	782594.05	2439336.08	14.37
30		782609.18	2439367.51	782596.88	2439350.18	21.24
29		782651.90	2439345.35	782609.18	2439367.51	48.11
28		782662.30	2439359.50	782651.90	2439345.35	17.56
27		782711.32	2439356.83	782662.30	2439359.50	49.08
50		782716.11	2439367.88	782711.32	2439356.83	12.05
49		782712.05	2439384.54	782716.11	2439367.88	17.15
48		782718.72	2439402.03	782712.05	2439384.54	18.7
47		782686.71	2439408.52	782718.72	2439402.03	32.67
46		782662.73	2439417.65	782686.71	2439408.52	26.12
45		782606.67	2439423.20	782662.73	2439417.65	55.83
44		782587.77	2439427.82	782606.67	2439423.20	19.41


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43		782538.04	2439333.73	782587.77	2439427.62	106.23
42		782524.31	2439304.17	782538.04	2439333.73	35.59
41		782540.06	2439285.55	782524.31	2439304.17	24.39
40		782549.90	2439288.41	782540.06	2439285.55	10.25
39		782562.44	2439294.76	782549.90	2439288.41	14.06
38		782573.27	2439304.24	782562.44	2439294.76	14.39
37		782590.38	2439304.76	782573.27	2439304.24	17.12

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
82	375	781815.81	2438725.57	781805.49	2438729.70	11.09
81		781843.38	2438716.63	781815.81	2438725.57	28.98
80		781845.92	2438719.91	781843.38	2438716.63	4.16
97		781850.15	2438735.89	781845.92	2438719.91	16.53
96		781854.91	2438764.36	781850.15	2438735.89	28.87
95		781844.01	2438766.80	781854.91	2438764.36	11.18
94		781841.47	2438760.45	781844.01	2438766.80	6.8
83		781805.49	2438729.70	781841.47	2438760.45	47.3

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
151	428	782439.48	2438551.89	782429.74	2438542.77	13.18
163		782398.71	2438613.81	782439.48	2438551.89	74.44
158		782403.03	2438634.84	782398.71	2438613.81	21.59
159		782360.03	2438633.70	782403.03	2438634.84	42.39
157		782359.92	2438629.43	782360.03	2438633.70	4.28
156		782385.82	2438596.03	782359.92	2438629.43	33.92
155		782385.67	2438572.69	782385.82	2438596.03	30.63
154		782384.71	2438566.66	782385.67	2438572.69	6.1
153		782399.00	2438554.59	782384.71	2438566.66	18.7
152		782429.74	2438542.77	782399.00	2438554.59	32.93

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
161	446	782567.04	2438363.79	782555.21	2438357.87	13
150		782499.32	2438482.79	782567.04	2438363.79	120
149		782406.30	2438457.08	782499.32	2438462.79	5
148		782526.78	2438385.64	782406.30	2438457.08	78
147		782545.58	2438372.69	782526.78	2438385.64	23
146		782555.21	2438357.87	782545.58	2438372.69	18

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
162	448	782626.58	2438281.85	782620.01	2438281.60	7
145		782575.87	2438350.10	782626.58	2438281.85	85
144		782561.35	2438348.68	782575.87	2438350.10	14
143		782554.87	2438344.67	782561.35	2438348.68	8
142		782566.51	2438298.35	782554.87	2438344.67	46
141		782581.90	2438289.94	782566.51	2438308.35	18
140		782620.01	2438281.60	782581.90	2438289.94	39

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
125	434	782445.09	2438388.34	782429.72	2438382.50	16
124		782437.79	2438407.54	782445.09	2438388.34	20
123		782425.72	2438424.69	782437.79	2438407.54	20
122		782411.32	2438429.61	782425.72	2438424.69	16
121		782404.92	2438394.84	782411.32	2438429.61	34
120		782410.32	2438386.11	782404.92	2438394.84	10
119		782417.62	2438378.65	782410.32	2438386.11	10
118		782429.72	2438382.50	782417.62	2438378.65	12

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
133	439	782488.19	2438290.74	782497.18	2438285.57	11
131		782477.92	2438305.84	782488.19	2438290.74	14
130		782463.49	2438331.93	782477.92	2438305.84	30
126		782454.56	2438359.23	782463.49	2438331.93	30
125		782445.09	2438388.34	782454.56	2438359.23	30
118		782429.72	2438382.50	782445.09	2438388.34	16
117		782433.13	2438365.42	782429.72	2438382.50	18
116		782423.13	2438366.69	782433.13	2438365.42	10
115		782419.48	2438352.72	782423.13	2438366.69	14
114		782426.30	2438340.66	782419.48	2438352.72	13
160		782437.52	2438339.42	782426.30	2438340.66	12
139		782498.86	2438241.77	782437.52	2438339.42	114
138		782502.89	2438275.12	782498.86	2438241.77	36
137		782505.90	2438285.08	782502.89	2438275.12	10

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134		782497.18	2438285.57	782505.90	2438285.03	10
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SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
136	441	782491.49	2438305.76	782487.66	2438299.96	7.8
132		782489.35	2438311.84	782491.49	2438305.76	5.5
131		782477.92	2438305.84	782489.35	2438311.84	13
133		782488.19	2438290.74	782477.92	2438305.84	18.25
135		782487.66	2438299.96	782488.19	2438290.74	9.2

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
130	443	782463.49	2438331.93	782454.56	2438359.23	30
129		782473.72	2438336.93	782463.49	2438331.93	12
128		782468.43	2438348.99	782473.72	2438336.93	12
127		782462.92	2438351.53	782469.43	2438348.99	7
126		782454.56	2438359.23	782462.92	2438351.53	12

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
72	272	782691.02	2439146.65	782667.99	2439016.70	132
71		782580.02	2439151.47	782691.02	2439146.65	110
70		782551.77	2439148.82	782580.02	2439151.47	26
69		782537.06	2439145.54	782551.77	2439148.82	14
68		782488.69	2439146.07	782537.06	2439145.54	48
67		782494.09	2439209.47	782488.69	2439146.07	62
66		782536.32	2439209.13	782494.09	2439209.47	42
65		782512.40	2439241.20	782536.32	2439209.13	40
64		782497.34	2439246.13	782512.40	2439241.20	14
63		782443.03	2439122.25	782497.34	2439246.13	134
62		782465.65	2439118.37	782443.03	2439122.25	24
61		782529.15	2439102.65	782465.65	2439118.37	64
60		782535.65	2439099.00	782529.15	2439102.65	5
59		782578.04	2439022.80	782535.65	2439099.00	87
58		782622.02	2438960.73	782578.04	2439022.80	76
57		782632.02	2438935.49	782622.02	2438960.73	26
56		782660.59	2438934.85	782632.02	2438935.49	29
55		782666.31	2438924.85	782660.59	2438934.85	10
54		782671.86	2438925.65	782666.31	2438924.85	7
53		782706.00	2438949.03	782671.86	2438925.65	44
52		782751.01	2438974.79	782706.00	2438949.03	51
51		782752.66	2438985.82	782751.01	2438974.79	10
49		782667.99	2439016.70	782752.66	2438985.82	90

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
51	261	782741.37	2439457.82	782737.31	2439441.04	18
52		782805.80	2439473.12	782741.37	2439457.82	60
79		782807.52	2439482.16	782805.80	2439473.12	12
78		782821.81	2439501.61	782807.52	2439482.16	26
77		782734.96	2439516.03	782821.81	2439501.61	90
76		782730.74	2439500.16	782734.96	2439516.03	16
75		782729.94	2439486.51	782730.74	2439500.16	16
74		782719.94	2439456.34	782729.94	2439486.51	34
73		782725.88	2439442.04	782719.94	2439456.34	16
50		782737.31	2439441.04	782725.88	2439442.04	12

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
36	267	782591.20	2439292.16	782590.38	2439304.76	31.53
35		782645.84	2439297.19	782591.20	2439292.16	14.37
34		782621.37	2439325.76	782645.84	2439297.19	21.74
33		782608.27	2439331.45	782621.37	2439325.76	48.11
32		782594.05	2439336.08	782608.27	2439331.45	17.56
37		782590.38	2439304.76	782594.05	2439336.08	49.08

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
18	103	781824.82	2440564.43	781813.18	2440521.58	44.41
17		781718.99	2440573.74	781824.82	2440564.43	139.38
16		781719.73	2440567.18	781718.99	2440573.74	6.6
15		781709.78	2440567.92	781719.73	2440567.18	9.97
14		781681.84	2440564.96	781709.78	2440567.92	28.1
13		781683.53	2440549.40	781681.84	2440564.96	15.65
12		781687.58	2440538.29	781683.53	2440549.40	11.82
11		781708.72	2440544.32	781687.58	2440538.29	22.02
10		781716.09	2440544.59	781708.72	2440544.32	7.37
9		781719.58	2440537.58	781716.09	2440544.59	7.82

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8		781729.54	2440530.86	781729.58	2440537.58	12.02
7		781741.53	2440524.01	781729.54	2440530.86	13.82
6		781746.10	2440505.88	781741.53	2440524.01	18.68
5		781759.98	2440492.15	781746.10	2440505.88	20.24
23		781780.53	2440512.06	781759.98	2440491.15	29.34
22		781786.55	2440541.97	781780.53	2440512.06	30.51
21		781791.55	2440560.07	781786.55	2440541.97	18.78
20		781794.73	2440575.07	781791.55	2440560.07	15.33
19		781813.18	2440621.58	781794.73	2440575.07	50.03

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV.NORTHING	DISTANCE (MTR)
41	588	781425.62	2440208.49	781435.29	2440222.90	17.31
40		781446.03	2440206.89	781425.62	2440208.49	20.48
39		781463.57	2440219.91	781446.03	2440206.89	21.84
38		781462.31	2440221.21	781463.57	2440219.91	1.82
37		781437.15	2440221.29	781462.31	2440221.21	25.19
36		781435.19	2440222.90	781437.15	2440221.29	2.56

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV.NORTHING	DISTANCE (MTR)
30	587	781375.05	2440156.31	781405.64	2440158.26	48.98
29		781377.25	2440164.41	781375.05	2440156.31	8.2
28		781344.78	2440156.73	781377.25	2440164.41	33.37
27		781336.74	2440056.82	781344.78	2440156.73	100.23
26		781362.50	2440049.16	781336.74	2440056.82	26.87
25		781385.42	2440075.93	781362.50	2440049.16	35.25
24	781405.64	2440118.26	781385.42	2440075.93	46.91	

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV.NORTHING	DISTANCE (MTR)
31	568	781312.53	2439858.80	781303.32	2439833.07	27.33
32		781329.82	2439857.90	781312.53	2439858.80	17.31
33		781318.72	2439837.66	781329.82	2439857.90	24.11
34		781308.33	2439827.05	781318.72	2439837.66	13.52
35		781303.32	2439833.07	781308.33	2439827.05	7.82

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV.NORTHING	DISTANCE (MTR)
1	746	781305.55	2439718.27	781301.42	2439674.44	44.04
2		781345.03	2439707.13	781305.55	2439718.27	41.02
3		781352.57	2439694.43	781345.03	2439707.13	14.77
4		781301.42	2439674.44	781352.57	2439694.43	54.93

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV.NORTHING	DISTANCE (MTR)
66	2169	782337.34	2437548.16	782335.55	2437538.17	11
65		782343.23	2437580.02	782337.34	2437548.16	13
64		782350.58	2437570.05	782343.23	2437580.02	13
63		782359.14	2437570.26	782350.58	2437570.05	9
62		782364.38	2437585.57	782359.14	2437570.26	15
61		782379.03	2437611.54	782364.38	2437585.57	29
60		782381.41	2437612.97	782379.03	2437611.54	3
59		782381.72	2437620.11	782381.41	2437612.97	8
58		782364.50	2437636.22	782381.72	2437620.11	23
57		782382.66	2437654.86	782364.50	2437636.22	23
56		782369.26	2437657.49	782382.66	2437654.86	12
55		782370.85	2437676.96	782369.26	2437657.49	20
54		782353.03	2437686.28	782370.85	2437676.96	19
53		782344.60	2437662.57	782353.03	2437686.28	24
52		782325.55	2437666.91	782344.60	2437662.57	20
51		782326.93	2437672.52	782325.55	2437666.91	7
50		782336.67	2437688.55	782326.93	2437672.52	18
49		782337.40	2437716.73	782336.67	2437688.55	26
48		782389.65	2437735.78	782337.40	2437716.73	18
47		782335.92	2437753.37	782389.65	2437735.78	16
46		782309.25	2437757.61	782335.92	2437753.37	26
45		782309.25	2437791.79	782309.25	2437757.61	12
44		782294.54	2437822.80	782309.25	2437791.79	33
43		782288.41	2437841.53	782294.54	2437822.80	21
42		782298.14	2437851.59	782288.41	2437841.53	12
41		782313.81	2437874.87	782298.14	2437851.59	25
40		782305.55	2437882.28	782313.81	2437874.87	11
39		782315.86	2437909.33	782305.55	2437882.28	30
38		782323.44	2437944.19	782315.86	2437909.33	34
37		782324.39	2437965.89	782323.44	2437944.19	22
36		782326.90	2437993.92	782324.39	2437965.89	26
277		782112.19	2437994.51	782326.90	2437993.92	214
276		782106.35	2437975.53	782112.19	2437994.51	19

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375	782067.19	2437980.66	782106.35	2437975.53	39
147	781984.89	2437883.07	782057.19	2437980.66	126
146	781967.88	2437867.58	781984.89	2437883.07	15
145	781985.84	2437860.52	781967.88	2437867.58	5
144	781982.00	2437842.97	781986.84	2437860.52	18
143	781967.56	2437835.51	781982.00	2437842.97	15
142	781979.86	2437823.69	781967.56	2437835.51	18
141	781985.23	2437815.62	781979.86	2437823.69	10
140	781984.52	2437807.92	781985.23	2437815.62	7
100	782064.31	2437657.47	781984.52	2437807.92	160
99	782093.52	2437652.23	782064.31	2437657.47	32
98	782102.10	2437650.01	782093.52	2437652.23	8
97	782107.33	2437655.57	782102.10	2437650.01	7
96	782125.83	2437655.41	782107.33	2437655.57	18
95	782129.15	2437627.15	782125.83	2437655.41	26
94	782130.34	2437606.22	782129.15	2437627.15	20
93	782128.99	2437592.88	782130.34	2437606.22	14
92	782133.76	2437576.21	782128.99	2437592.88	18
91	782128.67	2437567.06	782133.76	2437576.21	11
75	782145.92	2437536.59	782128.67	2437567.06	38
74	782163.36	2437531.43	782145.92	2437536.59	18
73	782183.49	2437523.67	782163.36	2437531.43	22
72	782194.44	2437517.75	782183.49	2437523.67	19
71	782224.62	2437538.24	782194.44	2437517.75	30
70	782240.75	2437547.80	782224.62	2437538.24	18
69	782243.40	2437546.11	782240.75	2437547.80	5
68	782282.58	2437549.11	782243.40	2437546.11	40
314	782308.94	2437546.25	782282.58	2437549.11	26
67	782335.55	2437538.17	782308.94	2437546.25	28

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
11	2103	781778.63	2438213.80	781800.59	2438220.29	22.89
10		781778.48	2438208.50	781778.63	2438213.80	5.3
9		781792.39	2438204.94	781778.48	2438208.50	14.36
8		781777.44	2438161.42	781792.39	2438204.94	46
7		781791.07	2438161.02	781777.44	2438161.42	13.63
6		781870.44	2438145.67	781791.07	2438161.02	80.84
5		781881.95	2438144.35	781870.44	2438145.67	11.59
4		781883.54	2438153.35	781881.95	2438144.35	9.15
3		781883.54	2438163.53	781883.54	2438153.35	10.19
2		781880.50	2438176.76	781883.54	2438163.53	13.57
1		781864.22	2438195.42	781880.50	2438176.76	24.75
18		781862.50	2438217.77	781864.22	2438195.42	22.42
17		781859.01	2438229.23	781862.50	2438217.77	11.98
16		781846.89	2438222.80	781859.01	2438229.23	13.73
15		781838.69	2438215.26	781846.89	2438222.80	11.14
14		781836.44	2438218.30	781838.69	2438215.26	3.77
13		781819.91	2438217.51	781836.44	2438218.30	16.55
12	781800.59	2438220.29	781819.91	2438217.51	19.51	

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
303	2177	782468.58	2437937.61	782525.26	2437870.61	88
302		782462.39	2437933.12	782468.58	2437937.61	8
301		782458.58	2437914.27	782462.39	2437933.12	19
300		782448.26	2437887.60	782458.58	2437914.27	29
299		782446.04	2437874.74	782448.26	2437887.60	13
298		782442.27	2437865.51	782446.04	2437874.74	10
297		782435.25	2437857.60	782442.27	2437865.51	10
296		782445.25	2437855.53	782435.25	2437857.60	10
295		782459.69	2437804.89	782445.25	2437855.53	52
294		782471.44	2437801.08	782459.69	2437804.89	12
293		782466.20	2437783.62	782471.44	2437801.08	17
292		782465.13	2437775.44	782466.20	2437783.62	10
291		782473.39	2437774.49	782465.13	2437775.44	9
290		782482.28	2437770.15	782473.39	2437774.49	9
289		782481.75	2437766.55	782482.28	2437770.15	4
288		782474.13	2437750.36	782481.75	2437766.55	18
287		782468.41	2437741.89	782474.13	2437750.36	10
286		782488.84	2437730.56	782468.41	2437741.89	23
285		782490.53	2437711.94	782488.84	2437730.56	19
284		782531.07	2437693.21	782490.53	2437711.94	44
313		782525.04	2437684.10	782531.07	2437693.21	9
312		782564.81	2437704.25	782525.04	2437684.10	47
311		782621.33	2437733.48	782564.81	2437704.25	54

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310	782614.78	2437740.28	782611.33	2437733.48	6
309	782557.80	2437780.91	782614.79	2437740.28	70
308	782538.75	2437798.22	782557.80	2437780.91	23
307	782535.58	2437804.73	782538.75	2437798.22	7
306	782531.77	2437823.78	782535.58	2437804.73	20
305	782528.11	2437862.20	782531.77	2437823.78	38
304	782525.26	2437870.63	782528.11	2437862.20	9

SL. NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
35		782327.11	2437996.22	782111.55	2437994.53	213
35		782363.35	2437999.48	782327.11	2437996.22	36
34		782395.27	2437988.89	782363.35	2437999.48	33
33		782404.40	2437989.16	782395.27	2437988.89	9
32		782413.79	2437991.80	782404.40	2437989.16	10
31		782420.14	2437996.04	782413.79	2437991.80	8
30		782584.02	2438039.56	782420.14	2437996.04	57
29		782361.40	2438085.47	782584.02	2438039.56	51
28		782338.38	2438128.73	782361.40	2438085.47	49
27		782319.07	2438159.81	782338.38	2438128.73	37
26		782261.79	2438192.62	782319.07	2438159.81	66
25		782235.33	2438198.05	782261.79	2438192.62	27
24		782187.44	2438204.93	782235.33	2438198.05	48
23		782148.15	2438214.05	782187.44	2438204.93	40
22		782127.33	2438222.78	782148.15	2438214.05	22
229		782089.01	2438215.25	782127.33	2438222.78	36
228		782091.53	2438209.56	782089.01	2438215.25	4
227		782091.92	2438198.05	782091.53	2438209.56	12
226		782108.46	2438198.84	782091.92	2438198.05	16
225		782122.75	2438196.86	782108.46	2438198.84	14
224		782127.77	2438194.34	782122.75	2438196.86	6
223		782124.86	2438187.20	782127.77	2438194.34	8
222		782127.08	2438182.77	782124.86	2438187.20	5
221		782137.17	2438178.79	782127.08	2438182.77	7
220		782132.14	2438170.66	782137.17	2438178.79	10
219		782132.67	2438163.52	782132.14	2438170.66	8
218		782153.05	2438124.37	782132.67	2438163.52	42
217		782142.86	2438118.14	782153.05	2438124.37	30
216		782123.81	2438156.11	782142.86	2438118.14	44
215		782119.97	2438179.13	782123.81	2438156.11	20
214		782095.62	2438180.43	782119.97	2438179.13	26
213		782091.60	2438183.08	782095.62	2438180.43	6
212		782091.07	2438186.47	782091.60	2438183.08	4
211		782073.61	2438189.01	782091.07	2438186.47	18
210	2095	782056.16	2438202.45	782073.61	2438189.01	20
209		782059.00	2438208.16	782056.16	2438202.45	6
208		782058.16	2438212.93	782059.00	2438208.16	4
207		782052.23	2438235.47	782058.16	2438212.93	26
206		782008.31	2438240.58	782052.23	2438235.47	42
205		782009.69	2438246.47	782008.31	2438240.58	6
204		781964.28	2438245.95	782009.69	2438246.47	44
203		781952.43	2438246.79	781964.28	2438245.95	10
202		781940.05	2438247.03	781952.43	2438246.79	12
201		781943.86	2438228.80	781940.05	2438242.03	12
200		781958.89	2438222.60	781943.86	2438228.80	16
199		781969.73	2438227.68	781958.89	2438222.60	10
198		781976.67	2438215.04	781969.73	2438227.68	14
197		781993.15	2438211.07	781976.67	2438215.04	18
196		781996.99	2438216.95	781993.15	2438211.07	6
195		782023.66	2438202.87	781996.99	2438216.95	34
194		782030.85	2438188.05	782023.66	2438202.87	26
193		782030.75	2438174.61	782030.85	2438188.05	14
192		782043.76	2438162.13	782030.75	2438174.61	18
191		782050.11	2438157.79	782043.76	2438162.13	7
190		782054.88	2438165.09	782050.11	2438157.79	9
189		782078.16	2438147.84	782054.88	2438165.09	28
188		782077.31	2438131.57	782078.16	2438147.84	16
187		782086.31	2438130.06	782077.31	2438131.57	9
186		782088.21	2438093.44	782086.31	2438130.06	16
185		782092.02	2438078.09	782088.21	2438093.44	16
184		782096.05	2438077.25	782092.02	2438078.09	4
183		782098.90	2438057.88	782096.05	2438077.25	19
182		782098.80	2438053.54	782098.90	2438057.88	4
181		782088.09	2438053.91	782098.80	2438053.54	10
180		782069.48	2438045.19	782088.09	2438053.91	20

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280		782086.15	2438037.79	782089.48	2438045.19	18
279		782086.95	2438020.06	782086.15	2438037.79	18
278		782101.37	2438014.24	782086.95	2438020.06	15
277		782111.55	2437994.53	782101.37	2438014.24	22

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
162	2125	781955.98	2438067.24	781923.74	2437991.38	83
161		781931.71	2438073.05	781955.98	2438067.24	25
160		781930.61	2438079.81	781931.71	2438073.05	22
159		781910.21	2438084.44	781910.61	2438079.81	5
158		781875.81	2438093.04	781910.21	2438084.44	35
157		781865.89	2438063.01	781875.81	2438093.04	32
156		781865.10	2438041.84	781865.89	2438063.01	21
155		781861.66	2438041.05	781865.10	2438041.84	4
154		781861.92	2438024.64	781861.66	2438041.05	16
153		781869.20	2438002.95	781861.92	2438024.64	23
152		781923.74	2437991.38	781869.20	2438002.95	56

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
181	2097	782088.09	2438053.91	782066.70	2438046.18	20
180		782068.23	2438099.80	782088.09	2438053.91	50
179		782063.07	2438120.56	782068.23	2438099.80	22
178		782060.69	2438141.99	782063.07	2438120.56	21
177		782047.83	2438147.70	782060.69	2438141.99	14
176		782045.45	2438153.66	782047.83	2438147.70	6
175		782001.06	2438179.27	782045.45	2438153.66	51
174		781997.75	2438199.09	782001.06	2438179.27	21
173		781994.81	2438196.36	781997.75	2438199.09	4
172		781976.40	2438195.01	781994.81	2438196.36	18
171		781974.25	2438167.39	781976.40	2438195.01	28
170		781972.80	2438164.93	781974.25	2438167.39	3
169		781969.49	2438166.83	781972.80	2438164.93	4
168		781967.98	2438163.42	781969.49	2438166.83	4
167		781958.30	2438162.23	781967.98	2438163.42	10
166		781951.39	2438139.05	781958.30	2438162.23	24
165		781949.25	2438123.49	781951.39	2438139.05	16
164		781950.89	2438121.59	781949.25	2438123.49	11
163		781958.94	2438075.92	781950.89	2438121.59	46
162		781955.08	2438067.24	781958.94	2438075.92	9
152		781923.74	2437991.38	781955.08	2438067.24	82
151		781916.41	2437968.32	781923.74	2437991.38	24
150		781954.17	2437934.10	781916.41	2437968.32	51
149		781971.48	2437914.10	781954.17	2437934.10	26
148		781978.78	2437899.97	781971.48	2437914.10	16
147		781984.89	2437883.07	781978.78	2437899.97	18
275		782056.91	2437979.72	781984.89	2437883.07	127
283		782076.75	2438012.95	782056.91	2437979.72	35
282		782062.47	2438012.95	782076.75	2438012.95	14
281		782066.70	2438046.18	782062.47	2438012.95	33

SL.NO	PLOT NO	EASTING	NORTHING	PREV.EASTING	PREV NORTHING	DISTANCE (MTR)
140	2166	781984.52	2437807.92	782064.31	2437657.47	166
139		781934.32	2437775.88	781984.52	2437807.92	60
138		781918.60	2437782.83	781934.32	2437775.88	18
137		781918.60	2437778.49	781918.60	2437782.83	5
136		781913.20	2437772.99	781918.60	2437778.49	8
135		781928.65	2437757.01	781913.20	2437772.99	12
134		781912.36	2437737.96	781928.65	2437757.01	26
133		781908.55	2437737.64	781912.36	2437737.96	4
132		781874.68	2437744.20	781908.55	2437737.64	18
131		781867.48	2437734.68	781874.68	2437744.20	12
130		781849.49	2437741.24	781867.48	2437734.68	18
129		781840.39	2437722.08	781849.49	2437741.24	20
128		781832.24	2437721.02	781840.39	2437722.08	2
127		781807.90	2437720.28	781832.24	2437721.02	28
126		781803.24	2437732.67	781807.90	2437720.28	12
125		781801.87	2437745.37	781803.24	2437732.67	10
124		781762.39	2437737.96	781801.87	2437745.37	40
123		781756.83	2437721.98	781762.39	2437737.96	14
122		781782.29	2437686.10	781756.83	2437721.98	40
121		781777.21	2437646.31	781782.29	2437686.10	21
120		781786.10	2437646.31	781777.21	2437646.31	20
119		781789.27	2437636.78	781786.10	2437646.31	10
118		781793.97	2437608.60	781789.27	2437636.78	28

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117	781812.38	2437635.33	781793.97	2437608.50	29
116	781815.56	2437636.52	781812.38	2437635.33	4
115	781825.74	2437636.52	781815.56	2437636.52	10
114	781841.22	2437631.49	781825.74	2437636.52	16
113	781823.89	2437597.73	781841.22	2437631.49	16
112	781888.19	2437581.45	781823.89	2437597.73	68
111	781897.58	2437616.41	781888.19	2437581.45	36
110	781928.83	2437614.69	781897.58	2437616.41	32
109	781929.09	2437609.53	781928.83	2437614.69	6
108	781921.95	2437572.09	781929.09	2437609.53	18
107	781947.61	2437566.27	781921.95	2437572.09	22
106	782044.95	2437550.50	781947.61	2437566.27	99
105	782060.31	2437550.18	782044.95	2437550.50	15
104	782065.51	2437563.47	782060.31	2437550.18	14
103	782073.16	2437591.54	782065.51	2437563.47	30
102	782072.49	2437607.41	782073.16	2437591.54	16
101	782067.47	2437634.00	782072.49	2437607.41	28
100	782064.31	2437657.47	782067.47	2437634.00	22

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
91	2240	782128.67	2437567.06	782145.92	2437536.59	38
90		782123.01	2437560.39	782128.67	2437567.06	7
89		782084.53	2437573.68	782123.01	2437560.39	40
88		782094.43	2437554.36	782084.53	2437573.68	20
87		782093.21	2437541.50	782094.43	2437554.36	13
86		782101.99	2437537.46	782093.21	2437541.50	9
85		782098.95	2437526.66	782101.99	2437537.46	11
84		782091.65	2437524.75	782098.95	2437526.66	6
83		782095.78	2437507.77	782091.65	2437524.75	17
82		782089.19	2437506.02	782095.78	2437507.77	5
81		782093.21	2437488.68	782089.19	2437506.02	18
80		782112.37	2437488.00	782093.21	2437488.68	19
79		782120.07	2437494.12	782112.37	2437488.00	9
78		782143.38	2437484.67	782120.07	2437494.12	22
77		782149.94	2437497.90	782143.38	2437484.67	15
76		782136.59	2437503.71	782149.94	2437497.90	14
75		782145.92	2437536.59	782136.59	2437503.71	34

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
107	2235	782203.10	2437481.97	782206.99	2437501.02	18
106		782215.29	2437482.53	782203.10	2437481.97	13
105		782217.80	2437488.62	782215.29	2437482.53	4
104		782226.27	2437488.22	782217.80	2437488.62	6
103		782239.50	2437515.61	782226.27	2437488.22	32
102		782254.31	2437531.61	782239.50	2437515.61	22
101		782245.58	2437543.52	782254.31	2437531.61	14
100		782231.16	2437512.83	782245.58	2437543.52	34
99		782188.45	2437529.36	782231.16	2437512.83	47
111		782183.57	2437523.28	782188.45	2437529.36	5
110		782198.29	2437515.90	782183.57	2437523.28	16
109		782198.38	2437502.43	782198.29	2437515.90	15
108	782206.99	2437501.02	782198.38	2437502.43	13	

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
129	2233	782335.09	2437538.40	782333.02	2437522.53	14
130		782323.42	2437541.94	782335.09	2437538.40	10
131		782274.34	2437548.69	782323.42	2437541.94	48
132		782265.21	2437546.84	782274.34	2437548.69	10
133		782243.25	2437546.84	782265.21	2437546.84	23
101		782245.58	2437543.52	782243.25	2437546.84	2
102		782254.31	2437531.61	782245.58	2437543.52	14
112		782280.25	2437524.48	782254.31	2437531.61	26
113		782275.73	2437511.94	782280.25	2437524.48	11
114		782267.17	2437480.43	782275.73	2437511.94	34
115		782265.98	2437475.98	782267.17	2437480.43	4
116		782269.15	2437455.03	782265.98	2437475.98	20
117		782283.76	2437462.02	782269.15	2437455.03	18
118		782292.49	2437474.79	782283.76	2437462.02	18
119		782301.06	2437474.00	782292.49	2437474.79	9
120		782293.44	2437484.24	782301.06	2437474.00	12
121	782307.25	2437503.55	782293.44	2437484.24	25	
122	782313.19	2437501.93	782307.25	2437503.55	5	
123	782317.23	2437502.26	782313.19	2437501.93	4	
124	782326.89	2437510.73	782317.23	2437502.26	13	

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125		782320.34	2437514.96	782326.89	2437510.73	7
126		782320.60	2437518.53	782320.34	2437514.96	4
127		782328.47	2437522.17	782320.60	2437518.53	9
128		782333.02	2437522.53	782328.47	2437522.17	4

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
87	2264	782003.74	2437557.14	782045.97	2437550.58	42
98		781999.44	2437512.98	782003.74	2437557.14	44
97		781996.89	2437476.91	781999.44	2437512.98	36
96		782040.91	2437479.09	781996.89	2437476.91	44
95		782041.52	2437494.07	782040.91	2437479.09	14
94		782047.58	2437500.19	782041.52	2437494.07	8
93		782047.67	2437511.31	782047.58	2437500.19	10
92		782042.93	2437515.25	782047.67	2437511.31	8
91		782043.36	2437526.36	782042.93	2437515.25	10
90		782049.23	2437528.06	782043.36	2437526.36	6
89		782060.17	2437550.46	782049.23	2437528.06	22
88		782045.97	2437550.58	782060.17	2437550.46	15

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
160	2217	782354.14	2437394.90	782365.99	2437427.92	34
159		782362.81	2437390.56	782354.14	2437394.90	9
158		782394.25	2437381.89	782362.81	2437390.56	31
157		782398.90	2437392.68	782394.25	2437381.89	10
156		782408.52	2437391.73	782398.90	2437392.68	8
155		782412.03	2437419.46	782408.52	2437391.73	29
154		782393.93	2437424.64	782412.03	2437419.46	19
153		782365.99	2437427.92	782393.93	2437424.64	28

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
134	2188	782457.54	2437538.50	782472.13	2437535.72	15
152		782452.23	2437517.51	782457.54	2437538.50	22
151		782445.35	2437495.10	782452.23	2437517.51	23
150		782424.21	2437503.27	782445.35	2437495.10	22
149		782420.19	2437487.90	782424.21	2437503.27	24
148		782439.93	2437482.66	782420.19	2437487.90	22
147		782455.68	2437477.90	782439.93	2437482.66	17
146		782452.13	2437451.59	782455.68	2437477.90	22
145		782477.70	2437450.17	782452.13	2437451.59	16
144		782481.57	2437463.30	782477.70	2437450.17	14
143		782509.08	2437462.41	782481.57	2437463.30	18
142		782510.41	2437469.91	782509.08	2437462.41	8
141		782544.87	2437469.67	782510.41	2437469.91	35
140		782548.43	2437523.75	782544.87	2437469.67	54
139		782531.05	2437525.61	782548.43	2437523.75	18
138		782527.37	2437510.59	782531.05	2437525.61	15
137		782520.62	2437511.86	782527.37	2437510.59	4
136		782474.77	2437516.95	782520.62	2437511.86	50
135		782472.13	2437535.72	782474.77	2437516.95	19

SL NO	PLOT NO	EASTING	NORTHING	PREV EASTING	PREV NORTHING	DISTANCE (MTR)
1		781533.73	2438070.69	781539.45	2438076.61	34
2		781550.16	2438040.69	781533.73	2438070.69	65
3		781573.44	2437979.83	781550.16	2438040.69	39
4		781575.95	2437941.07	781573.44	2437979.83	4
5		781572.03	2437941.34	781575.95	2437941.07	37
6		781571.42	2437904.03	781572.03	2437941.34	3
7		781574.37	2437903.24	781571.42	2437904.03	52
8		781573.05	2437850.78	781574.37	2437903.24	15
9		781575.65	2437836.00	781573.05	2437850.78	11
10		781581.88	2437826.64	781575.65	2437836.00	9
11		781581.51	2437818.17	781581.88	2437826.64	59
12		781639.72	2437826.37	781581.51	2437818.17	28
13		781667.37	2437830.87	781639.72	2437826.37	3
14		781669.75	2437829.02	781667.37	2437830.87	29
15		781673.90	2437799.68	781669.75	2437829.02	16
16		781689.10	2437805.86	781673.90	2437799.68	4
17		781689.06	2437810.10	781689.10	2437805.86	6
18		781694.97	2437810.49	781689.06	2437810.10	33
19		781689.68	2437853.46	781694.97	2437810.49	21
20		781668.62	2437855.90	781689.68	2437853.46	25


  
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21	781669.89	2437880.45	781668.62	2437855.90	56
22	781663.75	2437936.12	781669.89	2437880.45	26
23	781689.47	2437936.01	781663.75	2437936.12	59
24	781747.99	2437928.18	781689.47	2437936.01	55
25	781800.80	2437914.11	781747.99	2437928.18	13
26	781813.50	2437913.89	781800.80	2437914.11	11
27	781821.98	2437910.72	781813.50	2437913.89	2
28	781825.78	2437912.41	781823.98	2437910.72	13
29	781825.99	2437925.32	781825.78	2437912.41	6
30	781820.59	2437922.25	781825.99	2437925.32	63
31	781758.36	2437935.80	781820.59	2437922.25	71
32	781689.20	2437950.46	781758.36	2437935.80	27
33	781664.22	2437960.20	781689.20	2437950.46	2
34	781662.74	2437961.57	781664.22	2437960.20	27
35	781663.89	2437988.66	781662.74	2437961.57	31
36	781665.07	2438019.99	781663.89	2437988.66	42
37	781705.39	2438012.48	781665.07	2438019.99	11
38	781716.40	2438009.83	781705.39	2438012.48	5
39	781720.10	2438007.40	781716.40	2438009.83	8
40	781726.35	2438002.95	781720.10	2438007.40	8
41	781734.71	2438001.26	781726.35	2438002.95	45
42	781779.90	2437996.28	781734.71	2438001.26	17
43	781797.26	2437993.74	781779.90	2437996.28	10
44	781806.78	2437994.06	781797.26	2437993.74	11
45	781797.57	2438000.09	781806.78	2437994.06	9
46	781794.29	2438008.77	781797.57	2438000.09	9
47	781786.04	2438004.65	781794.29	2438008.77	18
48	781767.62	2438001.58	781786.04	2438004.65	6
49	781767.31	2438007.29	781767.62	2438001.58	2
50	781765.72	2438007.93	781767.31	2438007.29	20
51	781746.03	2438009.94	781765.72	2438007.93	20
52	781746.46	2438030.26	781746.03	2438009.94	22
53	781767.62	2438037.67	781746.46	2438030.26	8
54	781765.82	2438045.71	781767.62	2438037.67	16
55	781777.25	2438057.67	781765.82	2438045.71	9
56	781770.90	2438063.59	781777.25	2438057.67	19
57	781760.00	2438047.83	781770.90	2438063.59	2
58	781758.31	2438048.25	781760.00	2438047.83	16
59	781745.82	2438058.73	781758.31	2438048.25	6
60	781747.30	2438064.34	781745.82	2438058.73	9
61	781740.83	2438070.79	781747.30	2438064.34	3
62	781741.16	2438073.75	781740.83	2438070.79	9
63	781733.54	2438069.10	781741.16	2438073.75	11
64	781724.97	2438062.01	781733.54	2438069.10	2
65	781723.28	2438061.80	781724.97	2438062.01	22
66	781715.24	2438082.22	781723.28	2438061.80	17
67	781700.74	2438091.85	781715.24	2438082.22	19
68	781684.97	2438102.01	781700.74	2438091.85	11
69	781677.77	2438094.29	781684.97	2438102.01	14
70	781664.01	2438098.63	781677.77	2438094.29	23
71	781642.42	2438106.67	781664.01	2438098.63	7
72	781635.54	2438108.79	781642.42	2438106.67	7
73	781635.75	2438115.88	781635.54	2438108.79	18
74	781638.08	2438114.08	781635.75	2438115.88	11
75	781607.50	2438115.24	781638.08	2438114.08	14
76	781593.32	2438117.99	781607.50	2438115.24	4
77	781589.61	2438119.69	781593.32	2438117.99	2
78	781587.49	2438119.26	781589.61	2438119.69	4
79	781586.22	2438115.88	781587.49	2438119.26	2
80	781584.64	2438114.50	781586.22	2438115.88	3
81	781577.76	2438110.16	781584.64	2438114.50	16
82	781568.66	2438104.13	781577.76	2438110.16	10
83	781561.25	2438097.25	781568.66	2438104.13	15
84	781554.16	2438084.44	781561.25	2438097.25	10
85	781545.58	2438078.62	781554.16	2438084.44	6
86	781539.45	2438076.61	781545.58	2438078.62	8

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SL.NO	PLOT NO	EASTING	NORTHING	PREV. EASTING	PREV. NORTHING	DISTANCE (MTR)
415		782545.20	2437809.59	782539.53	2437848.32	40
414		782624.47	2437743.42	782545.20	2437809.59	103
425		783228.42	2438112.82	782624.47	2437743.42	708
424		783417.87	2438386.14	783228.42	2438112.82	332
423		783553.69	2438403.70	783417.87	2438386.14	137
422		783477.63	2438490.75	783553.69	2438403.70	116

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421	783277.42	2438441.56	783477.63	2438490.75	208
420	783209.95	2438717.78	783277.42	2438441.56	286
419	783182.10	2438890.02	783209.95	2438717.78	134
418	783150.84	2438875.53	783182.10	2438850.02	40
417	783087.97	2438884.73	783150.84	2438875.53	60
416	783034.32	2438905.21	783087.97	2438884.73	58
415	783027.49	2438895.85	783034.32	2438905.21	10
414	782944.51	2438912.83	783027.49	2438895.85	84
413	782865.88	2438953.20	782944.51	2438912.83	88
412	782722.61	2438810.89	782865.88	2438953.20	200
411	782771.82	2438771.07	782722.61	2438810.89	62
410	782786.77	2438741.83	782771.82	2438771.07	22
409	782784.66	2438728.49	782786.77	2438741.83	16
408	782792.99	2438720.93	782784.66	2438728.49	10
407	782796.83	2438703.60	782792.99	2438720.93	18
406	782825.93	2438675.16	782796.83	2438703.60	40
405	782820.90	2438667.88	782825.93	2438675.16	8
404	782780.42	2438702.54	782820.90	2438667.88	46
403	782772.75	2438715.24	782780.42	2438702.54	14
402	782765.61	2438737.47	782772.75	2438715.24	24
401	782746.60	2438761.02	782765.61	2438737.47	38
400	782722.48	2438782.18	782746.60	2438761.02	36
399	782714.81	2438790.38	782722.48	2438782.18	10
398	782691.13	2438836.16	782714.81	2438790.38	50
397	782678.69	2438837.35	782691.13	2438836.16	14
396	782670.36	2438858.38	782678.69	2438837.35	22
395	782650.38	2438890.79	782670.36	2438858.38	38
394	782626.83	2438890.26	782650.38	2438890.79	24
393	782619.29	2438885.24	782626.83	2438890.26	8
392	782611.22	2438888.81	782619.29	2438885.24	10
391	782607.52	2438908.39	782611.22	2438888.81	18
390	782574.05	2438922.68	782607.52	2438908.39	16
389	782554.47	2438940.80	782574.05	2438922.68	28
388	782558.17	2438952.44	782554.47	2438940.80	12
387	782563.60	2438954.29	782558.17	2438952.44	6
386	782570.74	2438945.17	782563.60	2438954.29	12
385	782585.29	2438958.00	782570.74	2438945.17	20
384	782508.30	2439008.53	782585.29	2438958.00	92
383	782401.91	2439003.13	782508.30	2439008.53	108
382	782407.26	2438814.61	782401.91	2439003.13	190
381	782411.94	2438810.92	782407.26	2438814.61	5
380	782403.03	2438634.84	782411.94	2438810.92	175
379	782398.21	2438613.81	782403.03	2438634.84	22
378	782439.48	2438551.89	782398.21	2438613.81	74
377	782499.32	2438462.79	782439.48	2438551.89	117
376	782567.04	2438363.79	782499.32	2438462.79	120
375	782584.75	2438372.65	782567.04	2438363.79	20
374	782593.78	2438367.26	782584.75	2438372.65	8
373	782576.02	2438353.44	782593.78	2438367.26	20
372	782575.87	2438350.10	782576.02	2438353.44	4
371	782526.58	2438281.85	782575.87	2438350.10	85
370	782630.78	2438282.00	782526.58	2438281.85	5
369	782714.29	2438258.99	782630.78	2438282.00	86
368	782712.07	2438248.03	782714.29	2438258.99	10
367	782868.75	2438124.21	782712.07	2438248.03	200
366	782815.25	2438089.28	782868.75	2438124.21	63
365	782805.09	2438072.46	782815.25	2438089.28	20
364	782789.38	2438079.28	782805.09	2438072.46	17
363	782791.28	2438111.19	782789.38	2438079.28	32
362	782754.77	2438117.70	782791.28	2438111.19	36
361	782720.09	2438114.49	782754.77	2438117.70	35
360	782685.03	2438105.76	782720.09	2438114.49	36
359	782668.09	2438124.62	782685.03	2438105.76	20
358	782660.82	2438130.63	782668.09	2438124.62	17
357	782578.14	2438160.00	782660.82	2438130.63	88
356	782565.90	2438173.07	782578.14	2438160.00	18
355	782550.22	2438195.98	782565.90	2438173.07	26
354	782536.85	2438209.08	782550.22	2438195.98	12
353	782526.94	2438214.77	782536.85	2438209.08	17
352	782527.60	2438223.10	782526.94	2438214.77	9
351	782498.86	2438241.77	782527.60	2438223.10	34
350	782437.52	2438339.42	782498.86	2438241.77	114
349	782426.30	2438340.66	782437.52	2438339.42	12
348	782420.90	2438339.34	782426.30	2438340.66	6

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 Project Officer  
 Kulda OCP

450	782429.31	2438312.67	782420.90	2438339.34	28
449	782412.17	2438310.29	782429.31	2438312.67	16
448	782394.23	2438304.89	782412.17	2438310.29	20
447	782393.28	2438343.63	782394.23	2438304.89	38
446	782309.14	2438350.14	782393.28	2438343.63	82
445	782203.57	2438327.44	782309.14	2438350.14	106
444	782121.34	2438314.74	782203.57	2438327.44	84
443	782134.51	2438229.17	782121.34	2438314.74	86
442	782266.75	2438200.59	782134.51	2438229.17	125
441	782322.32	2438169.64	782266.75	2438200.59	62
440	782348.51	2438128.20	782322.32	2438169.64	49
439	782391.85	2438043.11	782348.51	2438128.20	96
438	782460.59	2437964.69	782391.85	2438043.11	105
437	782531.87	2437876.27	782460.59	2437964.69	113
436	782539.33	2437848.35	782531.87	2437876.27	29


  
**Project Officer**  
**Kulda OCP**



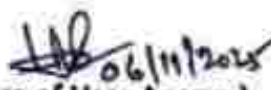
**UNDERTAKING FOR TREE FELLING / TREE TRANSLOCATION**

**Annexure-XXII**

This is to undertake that the cost towards felling of trees shall be deposited to the State Forest Department as per the demand raised by the Department.

The felling of trees will be carried out in a phased manner, strictly as per the requirement indicated in the approved Mining Plan, and only after obtaining prior permission from the concerned Divisional Forest Officer (DFO).

The possibility of translocation of the maximum number of trees identified for felling shall be actively explored in consultation with the State Forest Department. It is further ensured that tree felling shall be done only when unavoidable and that too under the strict supervision of the State Forest Department.

  
(Signature of User Agency)  
Official Seal

Date 06.11.2025

Place Basundhara

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा एपिओकैस्ट

  
DIVISIONAL FOREST OFFICER,  
SUNDARGARH FOREST DIVISION



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

No. 5418 VIII-08/2021 / Dt. 21/6/21

To

The Divisional Forest Officer,  
Sundargarh Forest Division, Sundargarh

Sub: Diversion of forest land measuring an area 134.69 Ha. for non-forest purpose in favour of Kulda OCP of M/s. MCL, Hemgir.

Sir,

With reference to the letter on the subject cited above, I am to furnish herewith the certificate regarding compliance of Scheduled Tribes and other traditional forest dwellers (Recognition of forest Right) Act- 2006 in respect of diversion of forest land measuring an area 134.69 Ha. for non-forest purpose in favour of Kulda OCP of MCL, in concerned villages Balinga, Bankibahal, Kulda, Siarnal, Tumulia and Lalma RF under Hemgir Tahasil for taking further course of action at your end.

Yours faithfully,

*[Signature]*  
21/6/2021

Addl District Magistrate,  
Sundargarh

Memo No. 5419 /Rev. Dt. 21/6/21

Copy to General Manager, MCL, Basundhara Area for information and necessary action.

*[Signature]*  
21/6/2021

Addl District Magistrate,  
Sundargarh

*[Handwritten signature]*  
SOLERD  
21/6/21

FORM NO. II  
( for projects other than linear projects )  
Government of Orissa  
Office of the District Collector, Sundargarh  
No. 5417 Dt. 21/10/21

TO WHOMSOEVER IT MAY CONCERN

In compliance of the Ministry of Environment and Forests (MoEF), Government of India's letter No. 11-8/98-FC(PG) dt. 3rd August, 2009 wherein the MoEF issued guidelines on submission of evidences for having initiated and completed the process of settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 ('FRA' for short) on the forest land proposed to be diverted for non-forest purposes, it is certified that 134.89 hectares of forest land proposed to be diverted in favour of Kulda OCP of M/s Mahanadi Coalfields Limited (MCL) for mining purpose in Sundargarh District falls within jurisdiction of village(s) Balinga I, Bankibahal 6.14 Ha., Kulda 8.89 Ha., Siarnal 1.61 Ha., Tumulia 35.81 Ha. & Lalma RF 83.24 Ha Total 134.69 Ha. in Hemgir Tehsil.

It is further certified that;

- The complete process for identification and settlement of rights under the FRA has been carried out for the entire 134.89 hectares of forest land proposed for diversion. A copy of records of all consultation and meetings of the Forest Rights Committee(s), Gram Sabha(s), Sub-Division Level Committee(s) and the District Level Committee are enclosed as annexure 1 to annexure 5.
- The proposal for such diversion (with full details of the project and its implications, in vernacular/ local language) have been placed before each concerned Gram Sabha of forest-dwellers, who are eligible under the FRA.
- The each of concerned Gram Sabha(s), has certified that all formalities/ processes under the FRA have been carried out, and that they have given their consent to the proposed diversion and the compensation and ameliorative measures, if any, having understood the purpose and details of proposed diversion. A copy of certificate issued by the gram sabha of village(s) Balinga, Bankibahal, Kulda, Siarnal and Tumulia is enclosed as annexure 1 to annexure 5.
- The discussion and decisions on such proposals had taken place only when there was a quorum of minimum 50% of the members of Gram Sabha present.
- The diversion of forest land for facilities managed by the Government as required under section 3 (2) of the FRA have been completed and the Grama Sabhas have given their consent to it.
- The rights of Primitive Tribal Groups and pre-Agricultural Communities, where applicable have been specifically safeguarded as per section 3 (1) (e) of the FRA.

End: As above

  
Signature  
(Full name and official seal of the District Collector)  
**COLLECTOR**  
**SUNDARGARH**

**LAND SCHEDULE OF FOREST LAND PROPOSED FOR DIVERSION**

Sl. No.	Name of the Tehsil	Name of the village	Khata No.	Plot No.	Kisam	Total Required Area in Ac.	Total required area in Ac. Or Ha.
1	2	3	4	5	6	8	9
1	Hemgir	Kukda	32	57	P.Jungle	1.00	21.87 or 8.89
2				64	P.Jungle	0.30	
3				263/p	P.Jungle	4.18	
4				267	P.Jungle	0.35	
5				272	P.Jungle	9.03	
6				374	P.Jungle	1.04	
7				375	P.Jungle	0.29	
8				379	P.Jungle	0.33	
9				381	P.Jungle	1.06	
10				428	P.Jungle	0.64	
11				434	P.Jungle	0.30	
12				439	P.Jungle	0.80	
13				441	P.Jungle	0.04	
14				443	P.Jungle	0.05	
15				448	P.Jungle	0.40	
16				448	P.Jungle	0.60	
17				261	P.Jungle	1.35	
18	Tumulta		260	2103(p)	Jungle	1.49	88.49 or 35.81
19				2125(p)	Jungle	1.72	
20				2095	Jungle	15.00	
21				2097(p)	Jungle	7.38	
22				2177(p)	Jungle	5.18	
23				2189(p)	Jungle	32.05	
24				2168	Jungle	11.42	
25				2240	Jungle	0.90	
26				2082	Jungle	13.35	
27	Sarnal		53	103(p)	Jungle	2.15	3.97 or 1.81
28				588(p)	Jungle	0.09	
29				587(p)	Jungle	1.34	
30				565(p)	S.Jungle	0.10	
31				785(p)	Jungle	0.29	
32	Bankibahal		57	72	Jungle	1.48	12.71 or 5.14
33				75	Jungle	9.30	
34				82	Jungle	0.58	
35				83	Jungle	1.35	
36	Balinga		Nil	Nil	Nil	Nil	
37	Lalma Reserve Forest Land	RF	Lalma RF			205.69	205.69 or 83.24
<b>Total</b>					Total area in Ac.		332.83
					Total area in Ha.		134.88

  
 Signature  
 (Full name and official seal of the District Collector)  
**COLLECTOR**  
**SUNDARGARH**

**LIST OF TITLE HOLDERS**

Sl.No.	Name of the village	Name of the claimant	Khata No	Plot No	Area involved	Kisam of the land
1	3	4	8	9	10	11
1	Siarmal	Artharam Kalo S/O-Chinta Mani	53	179,181,182	1.32	S.J
2	Siarmal	Sudarsan Pradhan S/O-Gajadhar	53	178/4	0.10	S.J
3	Siarmal	Mahendra Prasad Patel S/O-Rabiratan	53	152,153	0.65	S.J
4	Siarmal	Hrudananda Amat S/O-Budhuram	53	177/2,178/2	1.72	S.J
5	Siarmal	Arjun Patel S/O-Parsuram	53	9/2,2/3,4/1,161/1	5.98	S.J
6	Siarmal	Budhamati Raut W/O-Chandramani	53	9,2/4,4/6,161	5.34	S.J
7	Siarmal	Kallash Patel S/o-Bhagabatia	53	2,9/3,162/2,4,173	7.42	S.J
8	Siarmal	Suban Nalk S/O-Kalindra	53	178/7	0.20	S.J
9	Siarmal	Maheswar Patel S/O-Hrusikesh	53	53	1.05	S.J
10	Siarmal	Pati Patel S/O-Khageswar	53	103/4,103,355	1.50	S.J
11	Siarmal	Tiknu Patel S/O-Khageswar	53	103/8,14,393/1,256/1,257/1	1.12	S.J
12	Siarmal	Bishnu Patel S/O-Baiju	53	103/5,158,38,39,41	1.97	S.J
13	Siarmal	Kalakara Amat S/O-Baiju	53	103/6,160	0.55	S.J
14	Siarmal	Benudhar Patel S/O-Bhagabatia	53	4/5,2/5,250,904,162/3	6.73	S.J
15	Siarmal	Arati Patel W/O-Ramchandra	53	13/1,54	1.31	S.J
16	Siarmal	Manas Ranjan Patel S/O-Bhagabatia	53	2/2,4/2,9/1,4/4,173/4	6.52	S.J
17	Siarmal	Kokil Patel S/O-Mandhar	53	53/1	0.30	S.J
18	Siarmal	Bimal Bhitria S/O-Sukaman	53	53/1	0.35	S.J

19	Siarmal	Khetra Pradhan S/O-Thuru	53	748,247,249	0.12	SJ
20	Siarmal	Bapen Bagh S/O-Shrikara	53	178/3	0.10	SJ
21	Siarmal	Mohan Naik S/O-Harichandan	53	178/8,11/2	1.91	SJ
22	Siarmal	Mangal Pradhan S/O-Gajadhar	53	178/5	0.20	SJ
23	Siarmal	Budharam Amat S/O-hedngu	53	202/3	0.36	SJ
24	Siarmal	Brundaban Amat S/O-Budharam	53	202,177	2.84	SJ
25	Siarmal	Bhima Naik S/O-Harichandan	53	178/6,103/1	2.22	SJ
26	Siarmal	Ratikanta Naik S/O-Bhakchan	53	178/11	0.16	SJ
27	Siarmal	Subas Amat S/O-Brundaban	53	178	0.40	SJ
28	Siarmal	Binod Naik S/O-Shridhar	53	178/2,103/3	2.00	SJ
29	Siarmal	Raibari Amat W/O-Bhagaban	53	202/4	0.36	SJ
30	Siarmal	Dileswar Patel S/O-Balju	53	103/7,158	0.95	SJ
31	Siarmal	Sushila Sing W/O-Shradhakar	53	13/14	3.00	SJ
32	Siarmal	Gajindra Kalo S/O-Krushna	53	13/2,153/2	2.10	SJ
33	Siarmal	Gajindra Amat S/O-Sudharam	53	202/2,177/1	2.70	SJ
34	Siarmal	Rajindra Amat S/O-Sudharam	53	202/1	0.70	SJ
35	Siarmal	Jogeswar Naik S/O-Purnachandra	53	178/9,103/2	1.62	SJ
36	Siarmal	Budhu Amat S/O-Ghasi	53	261	0.41	SJ
37	Siarmal	Debaki Patel W/O-Manoj	53	87,19	0.40	SJ
38	Siarmal	Murali Dhar Barik S/O-Subal	53	246	0.19	SJ

No.	Name of the village	Name of the claimant	Khata No	Plot No	Area involved	Kisam of the land
1	3	4	8	9	10	11
1	Tumlia	Sradhakar Pradhan S/o- Sudarshan	258	1430/1, 1430/8	2.84	GJ
2	Tumlia	Bhagrathi Sikia S/o- Chandan		2125/2	0.30	GJ
3	Tumlia	Prasanta Rai S/o- Debananda	260	1348/6	0.50	PJ
4	Tumlia	Baikuntha Pradhan S/o- Saharu	260	2854/2	0.24	PJ
5	Tumlia	Degu Pradhan S/o- Kunjal	260	2932/1	0.22	PJ
6	Tumlia	Matiram Pradhan S/o- Bina	260	2932/2	0.12	PJ
7	Tumlia	Kumuda Bandhu Pradhan S/o- Sradhakar	258	1430/5	0.72	PJ
8	Tumlia	Bikram Sabar Gobardhan	206	2792	1.80	PJ
9	Tumlia	Bulu Majhi S/o- Munu	258	2136/1	0.17	GJ
10	Tumlia	Tarachand Choudhury S/o- Ramachandra	260	1348/3	0.16	PJ
11	Tumlia	Nabin Majhi S/o- Dambaru	258	2136/6	0.28	GJ
12	Tumlia	Maharagi Nalk S/o- Rupdhar	258	2136/1	0.20	GJ
13	Tumlia	Bipin Majhi S/o- Dambaru	258	2136/1	0.20	GJ
14	Tumlia	Laxman Nalk S/o- Nitvananda	258	2136/1	0.15	GJ
15	Tumlia	Binod Biswal S/o- Gurudev	260	940/2	1.10	PJ
16	Tumlia	Gopial Bhol S/o- Kulamani	260	1348/1	0.16	PJ
17	Tumlia	Rangabati Rai D/o- Karunakar Bhol	258	1430/12	3.60	GJ
18	Tumlia	Biseswar Nalk S/o- Gobinda	260	1276/2	0.15	GJ
19	Tumlia	Laxmi Bhol W/o- Sradhakar	260	1348/1	0.22	PJ
20	Tumlia	Nispuri Adha D/o- Benu	260	940/5	0.60	PJ
21	Tumlia	Manglu Pradhan S/o- Patu	260	2853/2	0.18	PJ
22	Tumlia	Chitrasen Pradhan S/o- Negi	260	2935/1	0.35	PJ
23	Tumlia	Saraswati Rai D/o- Karunakara	258	1430/7	3.90	GJ

24	Tumlia	Firoj Haigo S/o- Hrudananda	260	1221	1.97	J
25	Tumlia	Bijli Biswal W/o- Sriram Prasad	258	2136/10	0.17	GJ
26	Tumlia	Girish Singli S/o- Satrugna	258	1430/1	0.88	GJ
27	Tumlia	Gobardhan Majhi S/o- Dase	258	2136/1	0.20	GJ
28	Tumlia	Chintamani Bhoi S/o- Haldhar	260	1348/19	0.18	PJ
29	Tumlia	Bira Naik S/o- Nital	260	1348/1	0.16	PJ
30	Tumlia	Iswara Naik S/o- Jaganath	258	2136/1	0.26	GJ
31	Tumlia	Susanta Majhi S/o- Chintamani	260	1348/18	0.18	PJ
32	Tumlia	Butu Pradhan S/o- Negi	260	2935/2	0.18	PJ

  
 DISTRICT COLLECTOR  
 (Full name and official seal of the District Collector)

**UNDERTAKING FOR IMPLEMENTATION OF CONCURRENT RECLAMATION PLAN**

**Annexure-XXIV**

It is hereby undertaken that the concurrent reclamation activities shall be implemented from the very first year of mining operation as per the approved Mining Plan. An annual report on the implementation of the concurrent reclamation plan shall be prepared and submitted every year to the Nodal Officer (FCA), Government of Odisha, and the Regional Office, MoEF&CC, Bhubaneswar.

Date 06.11.2025

Place Basundhara

  
06/11/2025  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परिवर्जन अधिकारी  
कुल्दा परिवर्जन

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR REGRASSING OF MINED-OUT AND DISTURBED AREAS**

**Annexure-XXV**

It is hereby undertaken that the User Agency shall comply with the directions of the Hon'ble Supreme Court of India regarding regrassing and shall regrass the mined-out areas and any other areas disturbed due to mining operations, to restore them to a condition suitable for the growth of fodder, flora, and fauna.

  
06/11/2025  
(Signature of User Agency)  
Official Seal

Date 06.11.2025

Place Basundhara

Project Officer,  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

UNDERTAKING FOR PERIOD OF DIVERSION OF FOREST LAND

Annexure-XXVI

It is hereby undertaken that the diversion of forest land for the Kulda Expansion OCP project shall be co-terminus with the period of the mining lease granted under the provisions of the Mines and Minerals (Development and Regulation) Act, 1957, and the Rules framed thereunder, as amended from time to time.

Date...06.11.2025.....

Place...Basundhara.....

  
06/11/2025  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
REGIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR OBTAINING ENVIRONMENTAL CLEARANCE**

**Annexure-XXV!!**

It is hereby undertaken that the User Agency has submitted the proposal for obtaining Environmental Clearance (EC) for the Kulda Opencast Project (Expansion to 21.0 MTPA) under the provisions of the Environment (Protection) Act, 1986 and the EIA Notification, 2006 vide proposal no. IA/OR/CMIN/555625/2025.

It is further undertaken that the mining operations under the expansion proposal shall commence only after obtaining the requisite Environmental Clearance from the MoEF&CC, Government of India.

  
(Signature of User Agency)  
Official Seal

Date...06.11.2025.....

Place...Basundhara.....

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION


**UNDERTAKING FOR NON-ESTABLISHMENT OF LABOUR CAMP AND PROVISION OF  
ALTERNATE FUEL**

**Annexure-XX/111**

It is hereby undertaken that no labour camp shall be established on the forest land. It is further undertaken that alternate fuels such as LPG or kerosene shall be provided to all workers and staff deployed at the site to prevent dependence on forest resources for fuel requirements.

Date 26.11.2025

Place Basundhara

  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



*JAD*  
15/12/2018  
Project Officer  
Gulda Opencast Proje.  
परियोजना अधिकारी  
कल्दा परियोजना



Sundargarh, Odisha, India  
Sambalpur Forest Range, Sundargarh, Odisha  
INDIA  
E: 91 94370 81187 | C: 91 674 61 1421  
P: 91 674 61 1421 | 91 674 61 1421

LAP 15/12/2024  
Project Officer  
Gulda Opencast Project  
परियोजना अधिकारी  
गुल्दा ओपनकास्ट



30

*LAP* 12/12/2014  
Project Officer  
Lulda Opencast Project  
परियोजना अधिकारी  
लुल्दा परियोजना



**UNDERTAKING FOR DEMARCATION OF SAFETY ZONE BOUNDARIES**

Annexure-xxx

It is undertaken that the demarcation of the safety zone (7.5-meter strip along the inner boundary of the mining lease) is presently under process and shall be completed shortly at the project cost by erecting four feet high RCC boundary pillars, each inscribed with its serial number, Inter-pillar distance and GPS/DGPS coordinates, strictly as per the guidelines of the Ministry and under the supervision of the State Forest Department.

MCL further undertakes to ensure that the demarcated boundaries of the diverted forest land, mining lease and safety zone shall be properly maintained throughout the lease period and shall not be altered, damaged, or removed without prior approval of the competent authority.

Date 15/12/2025

Place Kulda OCP

*LAD* 15/12/2025  
(Signature of User Agency)  
Official Seal Project Office  
Kulda Opencast Proj.  
परियोजना अधिकारी  
कुल्डा परियोजना

*[Signature]*  
DIVISIONAL FOREST OFFICER  
SUNGARSAH FOREST DIVISION

**UNDERTAKING FOR ADHERENCE TO APPROVED LAYOUT PLAN AND RESTRICTED USE  
OF FOREST LAND**

**Annexure-XXXI**

It is hereby undertaken that the approved layout plan of the project shall not be changed or modified without obtaining prior approval from the Central Government. The diverted forest land shall be used strictly for the purpose specified in the approved proposal and shall not be utilized for any other purpose, except for such changes in land use as may be permitted under the Ministry's guideline dated 26.12.2024.

  
(Signature of User Agency)  
Official Seal

Date... 06.11.2025

Place... Basundhara

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना


  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR NON-TRANSFER OF DIVERTED FOREST LAND  
WITHOUT APPROVAL**

**Annexure-XXXII**

It is hereby undertaken that the forest land proposed for diversion shall not, under any circumstances, be transferred, leased, or assigned to any other agency, department, or individual without obtaining the prior approval of the Central Government.

It is further undertaken that the User Agency shall retain full responsibility for the management, use, and protection of the diverted forest land and ensure that it is utilized strictly for the purpose for which approval has been granted.

  
(Signature of User Agency)

Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

Date 06.11.2025

Place Basundhara

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR PROTECTION OF FLORA AND FAUNA OF ADJOINING AREAS**

**Annexure-XXXIII**

It is hereby undertaken that no damage shall be caused to the flora and fauna of the adjoining forest and non-forest areas during the execution and operation of the project. All necessary precautions and mitigation measures shall be implemented to prevent any adverse impact on biodiversity and to ensure ecological protection.

It is further undertaken that all project-related activities shall be carried out in an environmentally responsible manner under the supervision of competent authorities.

Any observation, direction, or recommendation made by the Forest Department or other statutory authorities regarding the protection of flora and fauna shall be strictly complied with.

Date...06.11.2025.....

Place...Basundhara.....

  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNGIANGARH FOREST DIVISION

**UNDERTAKING FOR SUBMISSION OF ANNUAL SELF-COMPLIANCE REPORT**

**Annexure-XXXIV**

It is hereby undertaken that the User Agency shall submit the annual self-compliance report in respect of all the stipulated conditions to the State Government, the concerned Regional Office of the Ministry, and the Ministry of Environment, Forest and Climate Change by the end of March every year, on a regular basis.

  
(Signature of User Agency)  
Official Seal

Date 06.11.2025

Place Basundhara

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR COMPLIANCE WITH ANY ADDITIONAL CONDITIONS STIPULATED  
BY THE MINISTRY**

**Annexure-XXXV**

It is hereby undertaken that the User Agency shall abide by any additional condition that may be stipulated by the concerned Regional Office of the Ministry with the approval of the competent authority, in the interest of conservation, protection, and development of forests and wildlife.

It is further undertaken that any such additional conditions shall be implemented in letter and spirit within the specified time frame, and the compliance status shall be duly reported to the concerned authorities as required under the applicable provisions.

  
(Signature of User Agency)  
Official Seal

Date...06.11.2025.....

Place...Basundhara.....

Project Officer  
Kuida Opencast Project  
परियोजना अधिकारी  
खुला परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR COMPLIANCE WITH ALL APPLICABLE ACTS, RULES, REGULATIONS,  
GUIDELINES AND COURT/NGT ORDERS**

**Annexure-XXXVI**

It is hereby undertaken that the User Agency shall comply with all the provisions of the applicable Acts, Rules, Regulations, Guidelines, and Orders issued by the Hon'ble Courts and the National Green Tribunal (NGT) that are in force or may come into force from time to time in relation to this project.

It is further undertaken that all project-related activities shall be carried out strictly in accordance with the prevailing legal and regulatory framework, and any directions or observations issued by the competent authorities, Hon'ble Courts, or the National Green Tribunal shall be promptly implemented in true letter and spirit.

  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

Date 06.11.2025

Place Baxundhara


  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR ADHERENCE TO FOREST CLEARANCE CONDITIONS AND  
AVOIDANCE OF VIOLATION**

**Annexure-XXXV(I)**

It is hereby undertaken that the User Agency shall ensure strict adherence to all the conditions stipulated in the Stage-I Forest Clearance approval granted under the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

It is further undertaken that no violation of any of these conditions shall occur during the execution and operation of the project. The User Agency shall remain fully responsible for compliance, and any observation or directive issued under para 1.16 of Chapter 1 of the Consolidated Guidelines and Clarifications on the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, issued by the Ministry vide letter dated 29.12.2023, shall be duly followed.

  
(Signature of User Agency)  
Official Seal

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

Date... 06.11.2025 .....


Place... Basundhara .....

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**UNDERTAKING FOR UPLOADING OF COMPLIANCE REPORTS ON E-PORTAL**

**Annexure-XXXV(11)**

It is hereby undertaken that the User Agency shall upload the annual and periodic compliance reports in respect of all stipulated conditions on the e-portal (<https://parivesh.nic.in/>) within the prescribed timelines.

  
(Signature of User Agency)  
Official Seal

Date... 06.11.2025 .....

Place... Basundhara .....

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNGARAPAH FOREST DIVISION



5 DECADES OF UNEARTHING ENERGY

Office of the Project Officer  
Kulda Open Cast Project  
Basundhara Area  
AT/PO- Blinga, Sundergarh  
Odisha-770076

e-mail:po-kdp.mcl@coalindia.in

Ref: MCL/BA/PO/KOCP/E&F/2026-27/ 6 |

DATE: 27.04.2026.

To  
The Divisional Forest Officer  
Sundargarh Forest Division  
Sundargarh, Odisha

Sub: Submission of payment towards Additional Compensatory Afforestation (ACA) cost – Kulda OCP Expansion Project.

Ref:

1. Your Office Letter No. 2741/4F (Misc.) dated 22.04.2026 regarding demand of Addl. CA cost.
2. Stage-I (In-Principle) approval under FC Act for diversion of 134.69 ha forest land

Respected Sir,

With reference to the subject cited above, this is to inform that **Mahanadi Coalfields Limited, Basundhara Area** has complied with the demand raised by your office towards **Additional Compensatory Afforestation (ACA) cost** for Kulda OCP Expansion Project.

As per your demand letter, an amount of **₹10,64,08,800/- (Rupees Ten Crore Sixty-Four Lakh Eight Thousand Eight Hundred only)** was required to be deposited towards Additional CA over an area of 218.75 ha.

In this regard, it is submitted that the **full amount has been deposited through NEFT/RTGS in favour of CAMPA on 27.04.2026**, the details of which are as follows:

- **Amount Deposited:** ₹10,64,08,800/-
- **Date of Payment:** 27.04.2026
- **Application No.:** 5850293156
- **MoEF&CC File No.:** 8-07/2024-FC
- **Beneficiary:** Odisha CAMPA
- **Mode:** NEFT/RTGS
- **UTR No.:** SBINR52026042725633198

The copy of **NEFT/RTGS challan generated through Parivesh portal and payment proof** are enclosed herewith for your kind verification and record.

In view of the above, it is kindly requested to kindly take necessary action for forwarding the same to PCCF (Nodal) from your end.

---

**Encl:**

1. Copy of NEFT/RTGS Challan
  2. Copy of Payment proof
  3. Copy of Demand Letter
- 

Yours faithfully,



*[Handwritten Signature]*  
27/4/2026

**Project Officer**  
Kulda OCP, Basundhara Area  
Mahanadi Coalfields Limited

**Project Officer**  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

## AGENCY COPY



## NEFT / RTGS CHALLAN for CAMPA Funds

Date : 27-04-2026

Agency Name:	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	5850293156
MoEF/SG File No.	8-07/2024-FC
Location:	ORRISA
Address:	Kulda OCP, MCL Basundhara Area, Sundargarh, Odisha 770076 Sundargarh
Amount(in Rs)	106408800/-

Amount in Words : Ten Crore Sixty-Four Lakh Eight Thousand Eight Hundred Rupees Only

**NEFT/RTGS to be made as per following details;**

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150825850293156 <i>Valid only for this challan amount.</i>
Bank Name & Address:	Union Bank Of India FC S Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

## BANK COPY



## NEFT / RTGS CHALLAN for CAMPA Funds

Date : 27-04-2026

Agency Name:	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	5850293156
MoEF/SG File No.	8-07/2024-FC
Location:	ORRISA
Address:	Kulda OCP, MCL Basundhara Area, Sundargarh, Odisha 770076 Sundargarh
Amount(in Rs)	106408800/-

Amount in Words : Ten Crore Sixty-Four Lakh Eight Thousand Eight Hundred Rupees Only

**NEFT/RTGS to be made as per following details;**





Beneficiary Name:	ORRISA CAMPA
IFSC Code:	UBIN0996335
Pay to Account No.	150825850293156 <i>Valid only for this challan amount.</i>
Bank Name & Address:	Union Bank Of India FC S Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027

- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

**Note:** After making the required payment through challan, if the payment status has not been updated even after 7 working days, then kindly mail a copy of your challan with transaction date and reference id to Email: [fcsblr@unionbankofindia.bank](mailto:fcsblr@unionbankofindia.bank), [epurse@unionbankofindia.bank](mailto:epurse@unionbankofindia.bank), [ubin0903710@unionbankofindia.bank](mailto:ubin0903710@unionbankofindia.bank)

Online payment history made by their Agency under CBMPA

Help

Sl. No.	Proposal Detail	Application No	Application No (New)	Date of IN PRINCIPLE	Amount to be Paid/Amount Paid (IN Rs.)	Payment Status	Payment Detail	Demand Letter	
1	<p>PROJ:RHS/2023/0048</p> <p>RLDA EXPANSON OCP</p>	RHSN202300156	001001156	18 Jul 2025	CA: 0/- PCA: 0/- Safety Zone: 0/- SPV: 0/- Other Charges1: 0/- Other Charges2: 0/- Other Charges3: 0/- Total: 0/-	ADD CA: 2040000/- CAT: 0/- ADD PA: 0/- Other Charges: 0/-	 Paid	Fund Demand Verified by Nodal Officer On: 27 Apr 2026 Bank Name: Union Bank Of India Mode of Payment: NEFT/RTGS (Challan) Challan Generated On: 27 Apr 2026 Transaction Date: 27 Apr 2026	Demand Letter Issued Date:
2	<p>PROJ:RHS/2023/0048</p> <p>RLDA EXPANSON OCP</p>	RHSN202300183	004001183	18 Jul 2025	CA: 0/- PCA: 0/- Safety Zone: 0/- SPV: 0/- Other Charges1: 0/- Other Charges2: 0/- Other Charges3: 0/- Total: 0/-	ADD CA: 0/- CAT: 0/- ADD PA: 0/- Scheme for spy plants and soil & moisture meter: 2702000/-	 Paid	Fund Demand Verified by Nodal Officer On: 14 Nov 2025 Bank Name: Union Bank Of India Mode of Payment: NEFT/RTGS (Challan) Challan Generated On: 14 Nov 2025 Transaction Date: 14 Nov 2025	Demand Letter Issued Date:
3	<p>PROJ:RHS/2023/0048</p> <p>RLDA EXPANSON OCP</p>	RHSN202300177	006001177	18 Jul 2025	CA: 1796000/- PCA: 0/- Safety Zone: 0/- SPV: 1040000/- Other Charges1: 0/- Other Charges2: 0/- Other Charges3: 0/- Total: 2736000/-	ADD CA: 0/- CAT: 0/- ADD PA: 0/- Other Charges: 0/-	 Paid	Fund Demand Verified by Nodal Officer On: 22 Aug 2025 Bank Name: Union Bank Of India Mode of Payment: NEFT/RTGS (Challan) Challan Generated On: 22 Aug 2025 Transaction Date: 26 Aug 2025	Demand Letter Issued Date:
4	<p>PROJ:RHS/2023/0048</p> <p>RLDA EXPANSON OCP</p>	RHSN202300144	002001144	18 Jul 2025	CA: 0/- PCA: 0/- Safety Zone: 0/- SPV: 0/- Other Charges1: 0/- Other Charges2: 0/- Other Charges3: 0/- Total: 0/-	ADD CA: 0/- CAT: 0/- ADD PA: 0/- Site Specific Risk Life Conservation Plan: 11110000/-	 Paid	Fund Demand Verified by Nodal Officer On: 13 Jul 2025 Bank Name: Union Bank Of India Mode of Payment: NEFT/RTGS (Challan) Challan Generated On: 15 Jul 2025 Transaction Date: 08 Jul 2025	Demand Letter Issued Date:

AGENCY COPY



NEFT / RTGS CHALLAN for CAMPA Funds

Date : 27-04-2026

SBIN 520 26042725633198

Agency Name.	KULDA EXPANSION OCP, BASUNDHARA AREA, MCL
Application No.	5850293156
MoEF/SG File No.	8-07/2024-FC
Location.	ORRISA
Address.	Kulda OCP, MCL Basundhara Area, Sundargarh, Odisha 770076Sundargarh
Amount(in Rs)	106408800/-

Amount in Words : Ten Crore Sixty-Four Lakh Eight Thousand Eight Hundred Rupees Only

CH-10. 324476. dt. 27.04.26

NEFT/RTGS to be made as per following details;

Beneficiary Name:	ORRISA CAMPA
IFSC Code:	ORRISA0956335
Pay to the order of No.	5850293156
Journal No.	740-443
Checker ID No.	740-443
Bank Name & Address:	Union Bank Of India PCS Centre, 21/1, III Floor, Jetta Towers, Mission Road, Bengaluru-560027

SBI, BALINGA BRANCH  
 27 APR 2026  
 CASH  
 Valid only for this challan amount

This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only

**PROFORMA FOR VERIFICATION OF DEPOSITS IN COMPENSATORY AFFORESTATION FUND ANNEXURE - 11**

1.	Name of Office	Bhubaneswar	
2.	State/District/Forest Division to which the proposal relates	Odisha/ Sundargarh/ Sundargarh Forest Division	
3.	Name of User Agency, nature of proposal	Project Officer Kulda OCP, Basundhara Area, MCL.	
4.	Nature and category of proposal	Mining	
5.	Proposal number	FP/OR/MIN/50293/2020	
6.	Extent of forest area involved	134.69 Ha	
7.	Whether original or extension	Na	
8.	If extension of lease, please clarify if proposal involves additional forest area and if so, specify.	Na	
9.	Date of 1st Stage clearance	Dt. 10.07.2025	
10.	<b>Extent of CAMPA charges, head wise viz.:</b>		
	(a) Compensatory Afforestation	Rs. 10,99,09,200 /-	
	(b) Additional Compensatory Afforestation	Rs. 10,64,08,800 /-	
	(c) Penal Compensatory Afforestation	Na	
	(d) Catchment Area Treatment	Na	
	Wildlife Management Plan		Na
	(e) i) Site Specific Wildlife Conservation Plan	Rs. 11,15,12,000 /-	
	ii) Regional Wildlife Management Plan	Na	
	iii) Cost of Dwarf Plantation Scheme	Na	
	(f) Additional charges for diversion of area falling under notified/protected areas	Na	
	(g) Net Present Value	Rs. 16,54,78,787 /-	
	Any other charges/levies (Please specify)		
	(h) i) Penal NPV	Na	
	ii) Safety Zone	Na	
iii) 1.5 times Safety Zone	Na		
iv) Scheme for Gap plantation and soil moisture conservation activities within 100 mtr. from ML boundary.	Rs. 27,62,412 /-		
v) Interest on belated payment of NPV	Na		
Total		Rs. 49,60,71,199/-	
11.	Whether payment made through challan or otherwise. In case of online payment, details of-challan.	Challan and online payment.	

**Details of deposits**

Sl. No.	Type of deposit (NPV/CA/ IWMP/ Others (specify))	Whether by RTGS/DD/ NEFT (Specify)	UTR/ DD No.	Amount deposited (Rs.)	Date of deposit	Name of Bank from which amount transferred to account of CAF	Bank Account of CAF managed by CAMPA in which fund deposited
i)	NPV	NEFT	UTR No. SBINR 52025082696596623	165478787	26.08.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027	AC No. 150825850293737 IFSC Code- UBIN0996335
ii)	Interest on belated payment of NPV	Nil	Nil	Nil	Nil	Nil	Nil
iii)	Compensatory Afforestation Scheme	NEFT	UTR No. SBINR 52025082696596623	109909200	26.08.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293737 IFSC Code- UBIN0996335
iv)	Addl. amount of CA Scheme	NEFT	UTR No. SBINR 52026042725633198	106408800	27.04.2026	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293156 IFSC Code- UBIN0996335
v)	Differential amount of CA Scheme.	Nil	Nil	Nil	Nil	Nil	Nil
vi)	Site Specific Wildlife Conservation Plan	NEFT	UTR No. SBINR 52025071892582223	111512000	18.07.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293440 IFSC Code- UBIN0996335
vii)	Regional Wildlife Management Plan	Nil	Nil	Nil	Nil	Nil	Nil
viii)	1.5 times Safety Zone etc.	Nil	Nil	Nil	Nil	Nil	Nil
ix)	Dwarf species Plantation	Nil	Nil	Nil	Nil	Nil	Nil
x)	Scheme for Gap plantation	NEFT	UTR No. SBINR 52025111405860265	2762412	14.11.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293283 IFSC Code- UBIN0996335

Date:

Place: Sundargarh

  
 Divisional Forest Officer  
 Sundargarh Forest Division



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

(Phone No-06622-272243, E-Mail- [dfi.sundargarh@odisha.gov.in](mailto:dfi.sundargarh@odisha.gov.in))



No. 2741 /4F (Misc.) /Dated. 22/04/2026

To

The Project Officer,  
Kulda OCP Basundhara Area, (MCL)  
Sundargarh, Odisha-770076.

Sub: - Proposal for seeking prior approval of the Central Government under Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69ha forest land for expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanadi Coal Fields Limited in Sundargarh District of Sundargarh Forest Division, Odisha. (Proposal No. FP/OR/MIN/50293/2020).

**-Demand for amount of Addl. Compensatory Afforestation Scheme.**

Ref: - 1. "In-Principle/Stage-I" approval of online Proposal No. FP/OR/MIN/50293/2020 dated.10.07.2025 issued by the Deputy Inspector General of Forests, GoI, MoEF & CC (FC Division), New Delhi.  
2. Memo No.8038 /RF(MG)-42/2023 dated.20.04.2026 of Chief Conservator of Forests (Nodal) O/o the PCCF & HoFF, Odisha Bhubaneswar.

Sir,

With reference to the subject cited above, as per Stipulated General Condition No. 2 (d) of "In-Principle/Stage-I" approval order, the PCCF (FD & Nodal Officer), FC-Act has approved the financial outlay of Addl. Compensatory Afforestation scheme to accommodate the plantation of balance seedlings as per matrix 2026-27 of approved one-time cost norm in different sites as detailed below: -

1. The financial outlay for Addl. Compensatory Afforestation Scheme to accommodate plantation of balance seedlings over an area of **135.5 ha of Degraded Reserve Forest land identified in Chitikhada RF (Patch-1) under Hengir Forest Range**, in respect of the above-mentioned project has been approved by PCCF (FD & Nodal Officer, FC Act) as per matrix 2026-27 of approved one-time cost norm for **Rs. 5,48,78,000/- (Rupees five crores forty-eight lakhs and seventy-eight thousand) only**, which is enclosed for your reference.

2. The financial outlay for Addl. Compensatory Afforestation Scheme to accommodate the plantation of balance seedlings over an area of **19.47 ha of Degraded Reserve Forest land identified in Chitikhada RF (Patch-2) under Hengir Forest Range** in respect of the above-mentioned project has been approved by PCCF (FD & Nodal Officer, FC Act) as per matrix 2026-27 of approved One-time cost norm for **Rs. 1,41,06,500/- (Rupees one crore forty-one lakhs six thousand and five hundred) only**, which is enclosed for your reference.

3. The financial outlay for Addl. Compensatory Afforestation Scheme to accommodate the plantation of balance seedlings over an area of **49.78 ha of Degraded Protected Forest land identified in Beberamunda PRF under Hengir Forest Range** in respect of the above-mentioned project has been approved by PCCF (FD & Nodal Officer, FC Act) as per matrix 2026-27 of approved One-time cost norm for **Rs. 3,47,49,200/- (Rupees three crores forty-seven lakhs forty-nine thousand and two hundred) only**, which is enclosed for your reference.

4. The financial outlay for Addl. Compensatory Afforestation Scheme to accommodate the plantation of balance seedlings over an area of 14.0 ha of Degraded DPF land identified in Tangarpali DPF under Ujalpur Forest Range in respect of the above-mentioned project has been approved by PCCF (FD & Nodal Officer, FC Act) as per matrix 2026-27 of approved One-time cost norm for Rs. 26,75,100/- (Rupees twenty-six lakhs seventy-five thousand and one hundred) only, which is enclosed for your reference.

Therefore, you are requested to deposit an amount of Rs.10,64,08,800/- (Rupees ten crores sixty four lakhs eight thousand and eight hundred) only towards Addl. Compensatory Afforestation scheme over an area of 218.75 Ha respectively through 'E' payment mode by using web portal of <http://parivesh.nic.in> (Parivesh Portal) of MoEF & CC, CAMPA account vide letter under reference and submit the original proof with seal and signature of the issuing bank to this Office needful action. The copy of total financial outlay of the project is enclosed herewith.

Encl: - As above.

Yours faithfully

  
Divisional Forest Officer,  
Sundargarh Forest Division

Memo No. 2742 /Dated. 28/04/2026.

Copy forwarded to Principal Chief Conservator of Forests (FD & No) FC-Act, O/o the PCCF & HoFF, Odisha Bhubaneswar for favour of kind information and necessary action with reference to his Memo No. 8036 dt.20.04.2026.

  
Divisional Forest Officer,  
Sundargarh Forest Division

Memo No. 2743 /Dated. 28/04/2026

Copy forwarded to the Regional Chief Conservator of Forests, Rourkela Circle Rourkela for favour of information and necessary action with reference to Memo No. 8037 dt.20.04.2026 of Chief Conservator of Forests (Nodal) O/o the PCCF & HoFF, Odisha Bhubaneswar.

  
Divisional Forest Officer,  
Sundargarh Forest Division

**ADDITIONAL CA SCHEME  
FOR 218.75 HA  
FOR KULDA EXPANSION OGP OF MCL**



**PREPARED BY  
SUNDARGARH FOREST DIVISION**

### Scheme (Additional)

For Compensatory Afforestation over 218.75 ha of Degraded Forest Land against diversion of 134.69 ha of forest land for Kulda Extension Opencast Project of Mahanadi Coalfield Limited (MCL) in Basundhara Area of District Sundargarh under Sundargarh Forest Division.

*(Area Selected: Chitkikhadu RF Patch-1 : 135.5 ha; Chitkikhadu RF Patch-2 : 19.47 ha; Beheramunda PRF: 49.78 ha; and Tangarpali DPF- 14ha Total: 218.75 ha)*

Planting *ANR with Gap Planting @500 per ha over 149.5 ha*  
Model *AR (Block Plantation) @1000 Seedlings / ha over*  
Proposed: *69.25 ha*

Cost Norm: One Time Cost Norm for CA adopted;

By

Divisional Forest Officer,  
Sundargarh Forest Division

**The Additional CA Scheme has been prepared in compliance to Condition No 2(d) of the In-Principle Approval Order dated 10.07.2025 (Proposal No FP/OR/MIN/50923/2020)**

**Content**

<b>Sl No</b>	<b>Description</b>	<b>Page</b>
1	Land Suitability Certificate by DFO, Sundargarh	2
2	Compensatory Afforestation Scheme	3-12
3	DFL Allotment order (Annexure-I)	
4	In Principle Approval Orders dated 10.07.2025 in respect of Proposal No FP/OR/MIN/50923/2020 (Annexure-II)	
5	Latitude / Longitude of survey points (GPS Coordinates) of site at Chitkikhadu Reserved Forest – Patch – 1 (Annexure IX)	
6	Latitude / Longitude of survey points (GPS Coordinates) of Chitkikhadu Reserved Forest – Patch – 2 (Annexure-X)	
7	Latitude / Longitude of survey points (GPS Coordinates) Beheramunda - PRF (Annexure-XI)	
8	Latitude / Longitude of survey points (GPS Coordinates) Tangarpali DPF (Annexure-XII)	
9	DSS Analysis Reports duly Signed by DFO, Sundargarh & countersigned by RCCF, Rourkela (Annexure-XIII)	
10	Corresponding Topo map of each Site(1:50000 Scale) (Plate-I, II & III)	In a Folder
11	Corresponding GPS map of each site	In a Folder
	KML file of Each site	Pen drive

### Land Suitability Certificate

It is certified that the 218.75 Ha Degraded Forest Land identified in forest Blocks as listed below and allotted for Additional Compensatory Afforestation purpose under Sundargarh Forest Division against diversion of 134.69 ha for Kulda OCP Extension Project of MCL, Basundhara area, has not been taken / previously allotted for any other projects and has not been settled under the Forest Right Act 2006. Further, the land is free from encroachment and encumbrances and is suitable for additional compensatory afforestation in the following Reserved Forests / Proposed Reserved Forest / Demarcated Protected Forests under administrative Control of forest department.

Sl No	Name of forest block	Area identified in Ha	Range
1	Chitkikhadu RF Patch-1	135.5	Hemgir
2	Chitkikhadu RF Patch-2	19.47	Hemgir
3	Beheramunda PRF	49.78	Hemgir
4	Tangarpali DPF	14.00	Ujalpur
	<b>Total 4 patches</b>	<b>218.75</b>	

  
Divisional Forest Officer  
Sundargarh Forest Division  
SUNDARGARH FOREST DIVISION

## 1. Purpose of the Scheme

This Additional Compensatory Afforestation (CA) Scheme has been prepared to comply with Condition No. 2(d) of the In-Principle Approval dated 10.07.2025 for diversion of 134.69 ha forest land for the Kulda Extension Opencast Project of MCL.

The condition requires:

- Minimum 1000 seedlings per hectare over the identified Degraded Forest Land (DFL).
- If the original CA land cannot accommodate 1000 seedlings/ha, the balance seedlings must be planted in additional RF/PF areas.

Since the originally identified CA patches could only accommodate 500 plants per hectare, additional forest land has been identified and this Additional CA Scheme has been prepared.

The condition No 2(d) of the in- principle approval orders dated 10.07.2025 in respect of Proposal no FP/OR/MIN/50923/2020 reads as follows.

*2(d). The State shall ensure that the CA scheme is prepared to accommodate at least 1000 seedlings/ha over DFL identified for CA. In case 1000 saplings cannot be accommodated per hectare in the DFL identified for CA, the balance seedlings will be planted in any RF/PF as per prescription of the working plan. The State Government will intimate the name/details of the RFs/PFs areas in which the balanced seedlings are to be planted. The user agency shall deposit the cost of plantation of the same.*

**Scheme for Addl. Compensatory Afforestation over 218.75 ha of Degraded Forest Land against the diversion of 134.69 ha of forest land for Kulda Extension Opencast Project of Mahanadi Coalfield Limited (MCL) in Basundhara Area of District Sundargarh under Sundargarh Forest Division:**

### 1.0 Background:

The Kulda Extension Open cast Project is over an area of 634.205ha. In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam. For diversion of Forest land for non-forestry use Diversion Proposal has been filed online vide Proposal No FP/OR/MIN/50923/2020 under provisions of Forest (Conservation) Act, 1980 now renamed as *Van Sarakshan Evam Samvardhan Adhiniyam*, 1980.

### 2.0 Compensatory Afforestation land Identified & provided with the Proposal:

As Mahanadi Coalfield Limited (MCL) is a Central Government Public Sector Unit, Degraded Forest Land (DFL) under the administrative control of Forest Department (Sundargarh Division) over an area of 305.59 ha (effective area- 286.96 ha) had been provided. The forest block wise area provided is as follows.

Sl No	Name of the forest block	Gross Area in ha Provided for CA Purpose	Effective area in Ha	Planting Model adopted / suggested.
1	Pandripani RF	64.10	56.30	ANR With Gap Planting @ 600 plants / Ha
2	Sidharmunda RF	53.56	53.56	ANR With Gap Planting @ 400 plants / Ha
3	Punjipahar RF	131.54	121.00	ANR With Gap Planting @ 600 plants / Ha
4	Panikholia RF	56.39	56.10	ANR With Gap Planting @ 400 plants / Ha
	Total:-	305.59	286.96	1,43,480 No of plants

### 3.0 Compensatory Afforestation Land identified & provided thereafter in accordance with the EDS letter No 8-7/2024-FC dated 06.01.2025.

The Compensatory Afforestation land has been identified in the following Forest Blocks (Degraded Forest land) under Sundargarh Forest Division. The allotment order is at **Annexure-I**.

DFL identified for taking up Compensatory Afforestation in lieu of Diversion of 134.69 ha for Kulda Ext. OCP

SI No	Name of forest block	Area identified in Ha	Range	Planting Model suggested
1	Sikajore A-RF	74.50	Lephrpada	ANR With Gap Planting @ 500 plants / Ha & intensive SMC
2	Sikajore PRF	40.00	Lephrpada	
3	Tangarpali DPF	14.00	Ujalpur	
<b>S. Total</b>		<b>128.50</b>		<b>64250 no of Plants</b>
Area available from initial identified forests				
1	Pandripani RF	64.30	Gopalpur	ANR With Gap Planting @ 500 plants / Ha & intensive SMC
2	Sidharmunda RF	50.40	Gopalpur	
3	Punjipahar RF	37.70	Gopalpur	
<b>S. Total</b>		<b>152.40</b>		<b>76200 Plants</b>
<b>Total 6 patches</b>		<b>280.90</b>		<b>140450 plants</b>

#### 4.0 Revision of the CA Scheme:

Considering the observations of the MoEF&CC, Govt. of India, New Delhi under Condition No 2(d) of the in-principle approval dated 10.07.2025 (**Annexure-II**) issued in respect of Proposal no FP/OR/MIN/50923/2020, as only 500 plants will be accommodated in the already identified CA patches as mentioned in para 3.0 above, additional CA land to accommodate the balance 1,40,450 plants has been identified and an additional CA Scheme has been prepared accordingly to raise 1,44,000 plants in an area of 218.75 Ha of degraded forest land. The condition stipulates for planting of 2,80,900 seedlings and this additional scheme is prepared here after to plant 1,44,000 plants in an area of 218.75 Ha, over and above the already approved scheme for planting 1,40,450 plants in an area of 280.90 ha.

#### 5.1 Location Details:

##### a) Chitkikhadu Reserved Forest:

The total area of Chitkikhadu RF is 1437.25 ha and under Hemgir Range of Sundargarh Division. Total 154.97 ha DFL has been identified in two patches. (Patch-1: 135.5 Ha and Patch-2: 19.47 ha ).

The selected area finds place in Survey of India Toposheet No (1: 50000 Scale). The corresponding Topo Map (All two patches in one Sheet) is at **Plate No-1**

##### b) Beheramunda PRF

Total area of Beheramunda PRF is 56.79 ha under Hemgir Range of Sundargarh Division. The identified area is 49.78 Ha in one patch. The selected area finds place in Survey of India Toposheet No (1: 50000 Scale). The corresponding Topo Map is at **Plate No-1**

### c) Tangarpali DPF

Total area of Tangarpali DPF is 328.852 ha under Ujalpur Range of Sundargarh Division. The identified area is 14 Ha in one patch. In the earlier scheme, the same patch was approved for holding 500 plants per Ha in ANR mode. In this scheme, the same patch will accommodate additional ANR of 500 plants per Ha i.e. total of 1000 Plantation / Ha. The selected area finds place in Survey of India Toposheet No F44L16 (1: 50000 Scale). The corresponding Topo Map is at Plate No-2

#### 5.2 Detail Administrative Jurisdiction:

The identified area comes under Hemgir Range & Ujalpur Range under Sundargarh Division as indicated below.

Name of Forest Block	Patch No	Range	Section	Beat	Remark / map reference
Chitkikhadu RF	1	Hemgir	Daghora	Lipaspali	F44R9/Plate-1
	2	Hemgir	Daghora	Beheramunda	F44R9/Plate-1
Beheramunda PRF	1	Hemgir	Daghora	Beheramunda	F44R9/Plate-1
Tangarpali DPF	1	Ujalpur	Ujalpur	Rupabahal	F44L16/Plate-2

#### 5.3 Topography & Soil:

The area identified is generally plain to moderately slope of 10°-15°

The soil is alluvial soil with good soil depth. Patches of gravelly soil is also observed but with limited extent. Soil depth is quite good to sustain vegetation / trees of long term rotation. The soil is compact and hard. It encourages high runoff during rains.

Top soil erosion is normally observed. No reel of Gully formation has been observed in general.

#### 6.0 Available Vegetation & Crop Density:

##### 6.1 Available Vegetation:

The forest blocks identified for compensatory afforestation are Dry Deciduous Sal Forest. In blank areas associates of Sal i.e. Saplings / poles of Chara (*Buchananialanzan*), Kendu (*Diospyros melanoxylon*), Karada (*Cleistanthus collinus*), Dhaura (*Anogeissus latifolia*), Asana (*Terminalia tomentosa*) are observed. Eupatorium is commonly observed as weeds and hindering with the establishment of natural saplings / Seedlings.

## 6.2 Crop Density.

The crop density of the identified patches / Forest blocks has been examined through DSS (Decision Support System). The crop density status as observed is furnished below.

Name of forest Block	Patch No	Area in ha	Area classified			Total
			MDF	OF	NF	
Chitkikhadu RF	1	135.5	0	112	22	134
	2	19.47	0	19	0	19
	<b>Sub Total</b>	<b>154.97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>153</b>
Beheramunda PRF	1	49.78	0	34	16	50
Tangarpali DPF	1	14	0	5	9	14
<b>Total</b>		<b>218.75</b>	<b>0</b>	<b>170</b>	<b>47</b>	<b>217</b>

## 6.3 Planting Model Suggested:

Basing on DSS analysis Report and field observation, it is proposed to adopt the following Planting model i.e.

Sl No	Planting Model	No of Seedlings per ha	Area to be covered in Ha	Total Seedling to be planted	Remarks
i	ANR with Gap planting	@500 Plants	148	74000	Suitable for ANR Plantation @500 seedlings to be planted over 149.5 Ha
ii	AR (Block Plantation)	@1000 plants	69	69000	Suitable for ANR Plantation @1000 seedlings to be planted over 69.25 Ha
	<b>Total</b>		<b>217</b>	<b>143000</b>	<b>144000 nos. of trees</b>

**6.4 Forest Block wise Seedlings proposed for Planting:**

<b>Name of Forest Block</b>	<b>Patch No</b>	<b>Area in ha</b>	<b>@500 / Ha</b>	<b>@1000/ Ha</b>	<b>Total Plants</b>
Chitkikhadu- RF	1	135.5	67750	0	67750 nos.
	2	19.47	0	19470	19470 nos.
	<b>Sub Total</b>	<b>149.5</b>	<b>67750</b>	<b>19470</b>	<b>87220 nos.</b>
Beheramunda- PRF	1	49.78	0	49780	49780 nos.
Tangarpali- DPF	1	14.00	7000	0	7000 nos.
<b>Total</b>		<b>218.75</b>	<b>74750</b>	<b>69250</b>	<b>144000 nos.</b>

### 6.5 Choice of Species:

The identified area is within Forest Blocks under management as per Working Plan prescription. (The outgoing Working Plan by Sri T.A.K.sinha IFS has been extended for 2<sup>nd</sup> year i.e. 2025-26. The PWPR has also been approved by the MoEF&CC, IRO, Bhubaneswar. The area identified / forest blocks are under Rehabilitation Working Circle. Choice of Species will be guided by the present vegetation and species which will merge with natural vegetation after say 20 years.

Choice of species are

- i. *Adiana Cardifolia* (Kuruma / Haldu)
- ii. *Anogeisuslatifolia* (Dhaura)
- iii. *Bombax Ceiba* (Simli)
- iv. *Cassia fistula* (Sunari)
- v. *Emblia officinalis* (Anla)
- vi. *Madhucaindica* (Mahula);
- vii. *Manjifera indica* (Aam)
- viii. *Pterocarpus marsupium* (Bija)
- ix. *Terminalia belerica* (Bahada)
- x. *Terminalia tomentosa* (Asana)
- xi. *Xyliaxylocarpa* (Tangan);
- xii. Any other species found suitable for the Purpose.

(NB: the forest Blocks taken for CA purpose is not coming in Bamboo Zone of the Division)

### 7.0 Planting parameters as indicated in Approved Cost norm for ANR:

#### a) Survey, Demarcation and Pillar Posting:

The identified area has been surveyed & pillars posted. It is to be resurveyed and missing pillars if any to be reposted as per Latitude / Longitude provided in the DGPS Map/ enclosed annexure,

#### b) Preparation of Treatment map (Digital map):

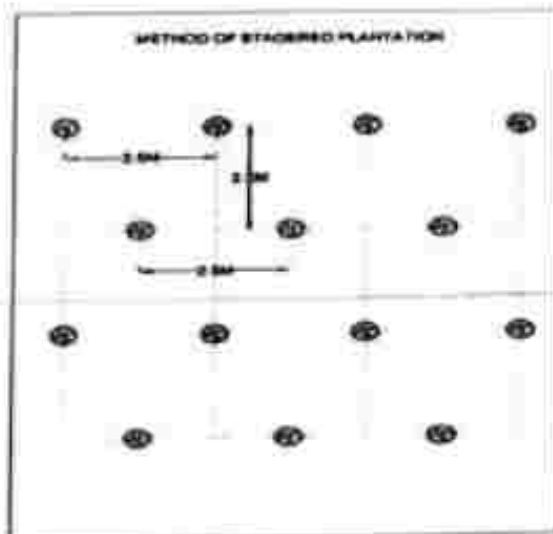
The Kml file of the area has been provided by the user agency after DGPS survey. The same will be updated with treatment design basing on physical position at the time of implementing the Plantation Scheme. The Range Officer will update the position with help of GIS cell of the Division / PCCF Office or through outsourcing.

#### c) Site Preparation:

After demarcation of the area, site preparation mostly clearing of invasive weeds / debris will be taken up as and where required.

**d) Silvicultural Cleaning:**

The present forest growth has been affected by biotic interference. The crop is degraded. There is every possibility of reviving the damaged saplings, Whippy growth under appropriate silvicultural tending operation. The following operations are prescribed.



- Cutting of High stumps (living one) with vigour to produce coppice shoots,
- In case of stumps having multiple coppice shoots, the promising shoots are to be retained and weak / lean shots are to be removed;
- Available natural seedling / saplings are to be retained and if required may be treated during soil working / weeding provided to planted seedlings;
- The area is mostly devoid of climbers, only annual climbers hindering with the natural growing seedlings / Saplings are to be cleared.
- Woody Fibrous climbers are to be retained. This is acting against uprooting of existing trees by interlocking the trees.

**e) Alignment & Stacking:**

The plantation Model is ANR planting @500 Plants per ha / block planting @ 1000 Plants per ha. There are blank areas in a scattered manner. All endeavor will be taken to take up stacking at a spacing of 2.5mx2.5m. The alignment will be of staggered manner to check runoff in sloppy terrain. The desired model is depicted in the right margin.

No stacking is to be given under a tree / shades. Stacking may be given in partially shady locations and during planting Shade bearing species / Partially Shade bearing species are to be planted

**f) Digging of Pits (45cmx45cmx45cm):**

It is proposed to dugout pits of size 45 cm x 45 cm x 45 cm preferably in month of February / March. The dugout earth will be kept at pit head on both sides separately. The top soil will be kept on one side and bottom soil on another side. Soil within 30cm from ground level will be considered as top soil and rest as bottom soil. The pits will be left for weathering due to Sun & Rain.

**g) Refilling of Pits & application of organic Compounds / CDM/ FYM:**

The pits will be refilled by altering the dugout soil of the pits i.e. top soil on bottom of the pit and bottom soil on top. Application of organic Compounds / CDM/ FYM & mixing the same properly before refilling is suggested. This will provide necessary nutrients to the plant as well as help in retaining soil moisture for a longer period.

**h) Transportation of Seedlings (18 month Old) including short carriage & watering at Pit site.**

In the approved cost norm, provisions have been made to plant 18month old seedlings. As seedlings will be above 1m height invariable, careful transportation of seedlings will be of paramount importance. In case of top breaking of seedlings, the benefit of 18month old seedlings will be reduced substantially. Transportation of seedlings from Nursery site to Planting site and then short carriage has to be taken up carefully. Wherever water is available, the plants are to be watered before short carriage to minimize the shock to plants during long carriage by tractors / vans etc.

**i) Planting of Seedlings:**

After application of FYM/ CDM/ Organic manure, seedling will be planted carefully. The standard planting procedure is to be followed. As the pit size is of 45cm x 45cm x 45cm the following care will be taken during planting.

- Chemical fertilizer / insecticides applied as basal doze to be thoroughly mixed with soil.
- Seedlings collar zone will be at Ground Level or at best 2.5cm below the ground level. In no case it will not be more than 3cm below Ground Level.
- The Poly bags containing the seedlings are to be carefully removed. It is better to use a blade to cut open the bag so as to cause least disturbance to the ball of earth containing the seedlings.
- After planting the soil is to be compacted leaving 3" around the plant and the compact soil may be at Ground Level or 1" above the Ground level – allowance for soil settlement.
- In no case it should be a sunken around the plant.
- The planted plant should stand erect, if it is tilted due to speedy growth, a support with a stick collected locally to be provided.

**j) Casualty Replacement:**

Casualty replacement is an important operation to achieve a 100% survival in a plantation. After planting there is possibility of casualty in planted seedlings. There is a provision to replace casualty up to 10% in 1<sup>st</sup> year and 10% in 2<sup>nd</sup> year operation in the approved cost norm. The same is to be carried out with good promising seedlings those can come up to a height of previous planted seedlings. During replacement in 2<sup>nd</sup> year application of fertilizers etc as in 1<sup>st</sup> year is to be followed.

**k) Weeding & application of Fertilizer:**

Two Weeding around the planted seedlings at a diameter of 1.00m has been prescribed in the approved cost norm. During 2<sup>nd</sup> weeding deep soil working around the plants at 1.00m diameter has also been prescribed. 1<sup>st</sup> weeding will be taken up just after one month of planting and 2<sup>nd</sup> weeding and soil working in month of September / October. As there is occasional rainfall in October providing half-moon trench in sloppy terrain around each plant is suggested. A half-moon trench model is given below.



- T: Half Moon Trench
- P: Plant position.

During weeding (1<sup>st</sup> & 2<sup>nd</sup>) there is a provision of application of fertilizer to plants. Application of NPK @30gms per plant x 2 times is suggested. In no case 2<sup>nd</sup> weeding can be delayed beyond 15<sup>th</sup> of October.

There is a provision of one weeding in the 2<sup>nd</sup> year (complete weeding), Soil working and manuring at a 1m diameter around the plant, the same is to be implemented as described for 1<sup>st</sup> Year.

Extra endeavor is to be made to provide soil working / manuring to naturally occurring seedling in the planted area as their survival is quite ensued. It will help in restocking the area at a short period. Its mention may be made in the Plantation Journal.

#### **l) Fire line Tracing & Inspection Path:**

Due to intensive protection grasses grow up within plantation. It is better to allow local people / VSS to cut the grasses take for stall feeding. Due to fallen dry leaves (Due to leaf shedding), there is possibility of fire hazards in February / March. It is suggested to have fire line at a width of minimum 3m all around the planting area, maintain inter partitioned line / both sides of foot path as a Fire line (minimum 3m wide in 1<sup>st</sup> year and 2m in subsequent year). These lines will be maintained as inspection path also. It will be maintained till completion of 10<sup>th</sup> year.

#### **m) Watch & Ward**

Watch and ward is essentially required against grazing in first two years and illicit felling in subsequent years. Adequate provisions have been made in the approved cost norm. Watch & ward provisions will be implemented as per provide norm. Besides watch & ward provided it is proposed to provide Bamboo Twig & Thorns fence around the Selected / identified area.

The various operations described above is in line of operations defined in the Onetime Cost norm approved vide Office Order No 1109/9F-(Misc0-387/2021 dated 08<sup>th</sup> November, 2021). In case of any contradiction the approved steps / planting process will be followed.

#### **7.1 Planting parameters as indicated in Approved Cost norm for AR:**

- a) Survey, Demarcation and Pillar Posting: (same as under ANR)
- b) Preparation of Treatment map (Digital map): (same as under ANR)

- c) Site Preparation:(same as under ANR)
- d) Alignment & Stacking: Spacing 3.16mx3.16m in case of 1000 plants per Ha and 2.5m x2.5m in case of 1600 plants per ha)
- e) Digging of Pits (45cmx45cmx45cm):
- f) Construction of Temporary labour Shed;
- g) Refilling of Pits & application of organic Compounds / CDM/ FYM Transportation of Seedlings (18 month Old) including short carriage & watering at Pit site.
- h) Planting of Seedlings:
- i) Casualty Replacement:
- j) Weeding & application of Fertilizer (1<sup>st</sup> weeding and 2<sup>nd</sup> Weeding):
- k) Fire line Tracing & Inspection Path:
- l) Watch & Ward

Details as in the approved cost norm (Base Cost norm and Matrix)

ANR Cost Norm Matrix- Annexure-III, AR @1000 Plants per ha Cost Norm matrix- Annexure-IV ;

#### **8.0 TOTAL COST OF THE PROJECT:**

For implementation of all the prescriptions out lined above Rs.7,30,07,832.00 (Rupees Seven Crores, Thirty Lakhs, Seven Thousand, Eight Hundred Thirty Two only) will be required as detailed below. As there will be a time lag between the preparation of the scheme and its implementation, the User Agency will pay the enhance wage rate as and when required. The scheme has been prepared as per 2026-27 plantation cost norm matrix.

Financial Outlay of Additional Compensatory Afforestation Scheme over 135.5 ha of Degraded Reserve Forest land identified in Chitkikhadu RF Patch-I under Hemgir Range of Sundargarh Forest Division against the diversion of Kulda Expansion OCP of MCL as per One-time Cost Norm.

Sl. No	Description	₹	Amount (Rs.)
1.	Cost of ANR Plantation @ 500 plants per hectare with 18 months old seedling over 135.5 ha. @ ₹1,73,705/- per ha with 10 years maintenance. (As per Cost Norm, Annexure-7, 2026-27).	₹	2,35,37,027.50
2.	Bamboo twigs and thorns fencing- As per real time estimate, the actual perimeter of CA land comes to be approximate 5280.88 RMT, dividing it by 250, the area comes to be 21.12 Ha. @ Rs. 1,27,588/- (As per Cost Norm, Fencing Model-F-1, 2026-27).	₹	26,94,658.56
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs. 45,475/- per ha over 135.5 ha with 5 years maintenance (As per Cost Norm, SMC Works Model-C, 2026-27).	₹	61,61,862.50
4.	Watering Provision- Solar System with Bore well (01 System for 05 ha) fitted with drip system (27 nos or 135.5 Ha) (As per matrix for watering @ 284171.00 x 27nos. vide model -W-I -2026-27).	₹	76,72,617.00
	<b>Total :-</b>	₹	<b>4,00,66,165.56</b>
	<b>Or</b>		<b>4,00,66,166.00</b>

(Rupees Four Crores Sixty Six Thousand One Hundred Sixty Six only)

  
 Divisional Forest Officer,  
 DIVISIONAL FOREST OFFICER,  
 SUNDARGARH FOREST DIVISION

Financial Outlay of Additional Compensatory Afforestation Scheme over 19.47 ha of Degraded Reserve Forest land identified in Chitkikhadu RF Patch-2 under Hemgir Range of Sundargarh Forest Division against Kulda Expansion OCP of MCL as per One-time Cost Norm.

Sl. No	Description	₹	Amount (Rs.)
1.	Cost of ANR Plantation @ 1000 plants per hectare with 18 months old seedling over 19.47 ha. @ ₹2,99,567/- per ha with 10 years maintenance. (As per Cost Norm, Annexure-4, 2026-27).	₹	58,32,569.49
2.	Bamboo twigs and thorns fencing- As per real time estimate, the actual perimeter of CA land comes to be approximate 2112.91 RMT, dividing it by 250, the area comes to be 8.45 Ha. @ Rs. 1,27,588/- (As per Cost Norm, Fencing Model-F-I, 2026-27).	₹	10,78,118.60
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs. 45,475/- per ha over 19.47 ha with 5 years maintenance (As per Cost Norm, SMS Works Model-C, 2026-27).	₹	8,85,398.25
4.	Watering Provision- Solar System with Bore well (01 System for 05 ha) fitted with drip system (04 nos or 19.47 Ha) (As per matrix for watering @ 284171.00 x 4 nos. vide model -W-	₹	11,36,684.00
	Total :-	₹	89,32,770.25
	Or		89,32,770.00

(Rupees Eighty Nine Lakhs, Thirty Two Thousand Seven Hundred and Seventy only).

  
 ORIGINAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION

**Financial Outlay of Additional Compensatory Afforestation Scheme over 49.78 ha of Degraded Protected Forest land identified in Beheramunda PRF under Hemgir Range of Sundargarh Forest Division against Kulda Expansion OCP of MCL as per One-time Cost Norm.**

Sl. No	Description	₹	Amount (Rs.)
1.	Cost of ANR Plantation @ 1000 plants per hectare with 18 months old seedling over 49.78 ha. @ ₹2,99,567/- per ha with 10 years maintenance. (As per Cost Norm, Annexure-4, 2026-27).	₹	1,49,12,445.26
2.	Bamboo twigs and thorns fencing- As per real time estimate, the actual perimeter of CA land comes to be approximate 3055.33 RMT, dividing it by 250, the area comes to be 12.22 Ha. @ Rs. 1,27,588/- (As per Cost Norm, Fencing Model-F-I, 2026-27).	₹	15,59,125.36
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs. 45,475/- per ha over 49.78 ha with 5 years maintenance	₹	22,63,745.50
4.	Watering Provision- Solar System with Bore well (01 System for 05 ha) fitted with drip system (10 nos or 49.78 Ha) (As per matrix for watering @ 284171.00 x 10 nos. vide model	₹	28,41,710.00
	<b>Total :-</b>	₹	<b>2,15,77,026.12</b>
	<b>Or</b>		<b>2,15,77,026.00</b>

**(Rupees Two Crores Fifteen Lakhs Seventy Seven Thousand and Twenty Six only)**

  
 Divisional Forest Officer  
 Sundargarh Forest Division  
 SUNDARGARH FOREST DIVISION

Financial Outlay of Additional Compensatory Afforestation Scheme over 14 ha of Degraded DPF land identified in Tangarpali DPF under Ujalpur Range of Sundargarh Forest Division against Kulda Expansion OCP of MCL as per One-time Cost Norm.

Sl. No	Description	₹	Amount (Rs.)
1.	Cost of ANR Plantation @ 500 plants per hectare with 18 months old seedling over 14 ha. @ ₹1,73,705/- per ha with 10 years maintenance. (As per Cost Norm, Annexure-7, 2026-27).	₹	24,31,870.00
	Note : SMC, Fencing & Watering works take up in earlier scheme Total :-	₹	24,31,870.00

(Rupees Twenty Four Lakhs Thirty One Thousand Eight Hundred and Seventy only)


  
 Divisional Forest Officer,  
 SUNDARGARH FOREST DIVISION  
 SUNDARGARH FOREST DIVISION

# CERTIFICATE ON DSS ANALYSIS FOR CA/ACA/PCA

This is to certify that DSS Analysis of land identified for CA/ACA/PCA and subsequent ground truthing have been done. The outcome is as mentioned below:

Sl. No	Name of Range	Name of the Forest Block (RF/PRF/PF/DPF/Revenue Forest)	Area identified for CA/ACA/PCA (in ha.)	Classification of identified land (in ha.)										Area suitable for plantation (in ha)			Plantation Model (AR/ANR)	Remark
				Very Dense Forest	Moderately Dense Forest	Open Forest	Non-Forest	Scrub	Water	Total	Open Forest	Non-Forest	Scrub	Total				
															5	6		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
1	Hemgir	Chitkhabade-RF (Part-1)	135.5	0	0	112	22	0	0	134	112	22	0	134	ANR Plantation @500 seedlings to be planted over 135.5 Ha			
2	Hemgir	Chitkhabade-RF (Part-2)	19.47	0	0	19	0	0	0	19	19	0	0	19	ANR Plantation @1000 seedlings to be planted over 19.47 Ha			
3	Hemgir	Behenanwanda-PRF	49.78	0	0	34	16	0	0	50	34	16	0	50	ANR Plantation @1000 seedlings to be planted over 49.78 Ha			
4	Ujalpur	Tangarpali-DPF	14	0	0	5	9	0	0	14	5	9	0	14	ANR Plantation @500 seedlings to be planted over 14 Ha			
<b>Total:-</b>			<b>218.75</b>	<b>0</b>	<b>0</b>	<b>170</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>217</b>	<b>170</b>	<b>47</b>	<b>0</b>	<b>217</b>				

Countersigned

  
**RCCF, Rourkela Circle**  
**Rourkela**

  
**Divisional Forest Officer**  
**Sundargarh Forest Division**  
**Sundargarh Forest Division**



# GIS based Decision Support System

FOREST COVER MAP

FCM (Forest)

- VERY DENSE FOREST
- MEDIUM DENSE FOREST
- DENSE FOREST
- SCrub
- NON FOREST
- WATER

ORISSA RAJGARH

TISGARH RAJGARH

REGIONAL FOREST OFFICER  
SUNJARGARH FOREST DIVISION

Load Polygon

Select Polygon

Get Land Forest Cover

MS Application

Get Time Stamp

Get Result Table

FCM Result

FTM Result

BS Result

DR Result

DSS Result

FCM Without Grid Result

Save Result Table

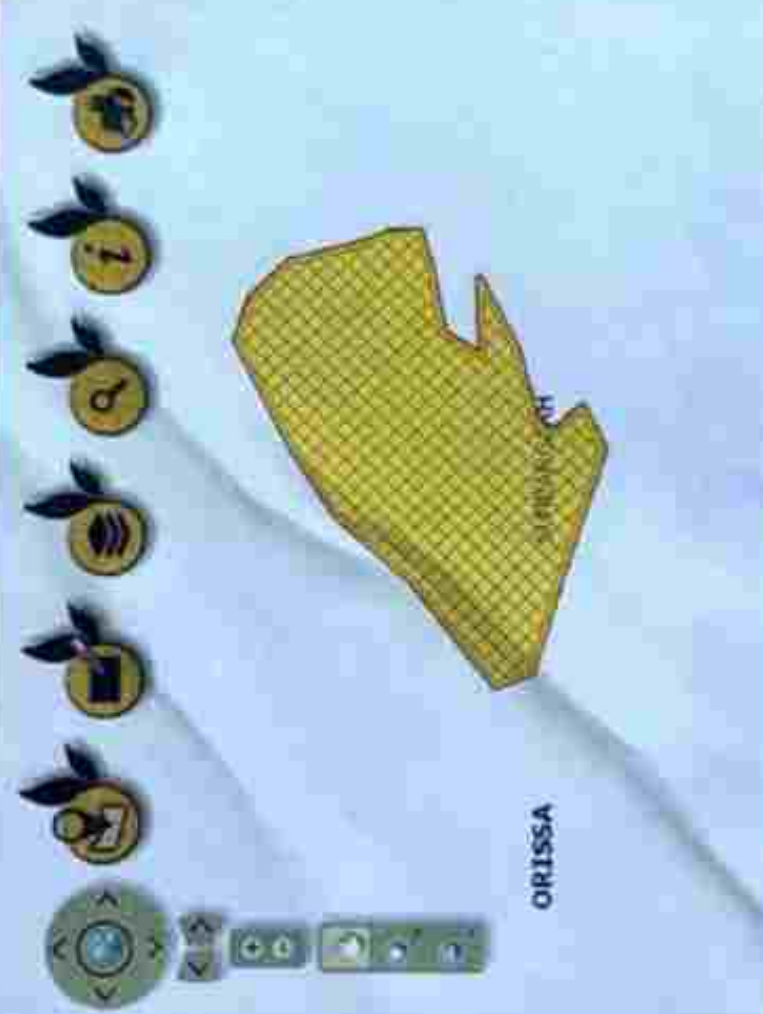
Forest Cover Map

FCM Without Grid Result	NON FOREST	0.2
MDF	OPEN FOREST	1.12
0.00		





# GIS based Decision Support System


[Load Policy](#)  
[Select Policy](#)  
[Decision Rule](#)  
[Get Land Use Forest Cover](#)  
[MIS Application](#)  
[Get Time Series](#)  
[Get Report Table](#)  
[ECM Result](#)  
[FIM Result](#)  
[FIC Result](#)  
[FI Result](#)  
[DSS Result](#)  
[FORM Without Good Result](#)  
[FORM With Good Result](#)  
[Save Result Table](#)



**ORISSA**



**FOREST COVER MAP**



- WETLANDS (SWELL)
- MODERATELY HIGH FOREST
- High Forest
- Low Forest
- High Forest
- Water

**FORM With Good Result**

**FORM Without Good Result**

**PHYSICAL FOREST OFFICER**  
**SUNDARJAH FOREST DIVISION**





Load Overlay  
 Select Polygon  
 Drawing Rule 1  
 East/West/Center/Left/Right  
 MS/Application  
 Get Image Source  
 Control Visible  
 EIR Feature  
 All Points  
 ESS Feature  
 EGM Without Grid Result  
 EIM Without Grid Result  
 BR Without Grid Result  
 First Sample Result  
 Save Result File

Forest (Grid) Map  
 EGM Without Grid Result  
 OPEN FOREST  
 Non forest

DIVISIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION

FOREST COVER MAP  
 Legend  
 Forest  
 Non Forest  
 Water  
 Open Forest  
 Non Forest



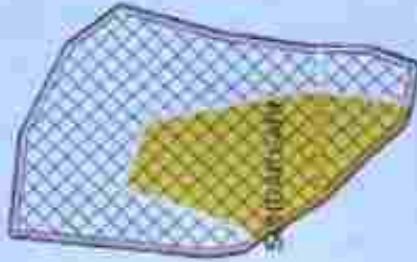
Digitized & approved by  
M. S. Ramesh Babu



# GIS based Decision Support System



- Home screen
- Spatial Polygon
- Decision Rule 1
- Get Input/Output Files
- IMS Application
- Get final Screen
- Get Result Table
- FCM Result
- FIM Result
- BF Result
- IJ Results
- DSS Result
- FBM Without God Result
- Same Result Table



FOREST COVER MAP

ITEM LEGEND

- VERY DENSE FOREST
- MARGINALLY DENSE FOREST
- OPEN FOREST
- REGULATED
- NON FOREST
- WATER

*[Signature]*  
 DIVISIONAL FOREST OFFICER  
 SUNDARGARH FOREST DIVISION

Forest Cover Map

FCM Without God Result

OPEN FOREST

NON FOREST









## Base Cost Norms for Compensatory Afforestation through Aided Natural Regeneration (ANR) @ 500 Seedlings/Ha.

## WAGE RATE Rs- 311/- PER MANDAY

Sl. No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Material Cost (In Rs.)	Total cost (In Rs.)
<b>0th Year (Advance work) Pre-Planting Operation</b>						
1	Survey, Demarcation and Pillar posting	Nov/Dec	2	622	0	622
2	Preparation of Topographic Map (Dy/Da) Map	Nov/Dec	1	311	100	411
3	Site preparation	Nov/Dec	2	622	0	622
4	Subsidiary operations including clearance of weed, cutting of climber, high stump cutting, singling of stems & removal of cut mat after drying from the field to blank space.	Jan/Feb	13	4043	0	4043
5	Alignment and stacking for digging of pits	Feb/Mar	1	311	0	311
6	Digging of pits (45 cm x 45 cm x 45 cm) in hard and gravelly soil	Feb/Mar	20	6220	0	6220
<b>Total</b>			<b>43</b>	<b>12751</b>	<b>100</b>	<b>12851</b>
<b>1st Year/Planting Year</b>						
1	Refilling of pits by allowing the deeper soil of the pits, application of organic compost/ COM/ FYM & mixing the same perfectly.	Jan/Mar	1	311	2500	2811
2	Transportation of 18 months old polythene bag seedlings in hired truck /tractor from the permanent/Nege nursery to planting site including Loading & unloading. (Average load of 10 tons) & Stacking the seedling @ Rs.5/- Seedling (550 nos)	Jan/Apr	8	0	3200	3200
3	Watering polythene bag seedlings at stacking site of plantations	Jan/Apr	1	311	0	311
4	Conveyance of polythene bag seedlings on head load from the stacking site to individual dugout pits within the planting site, applying insecticide, fertilizer & planting after sowing the soil with other applied material and pressing the soil perfectly around the planted seedling.	Jan/Apr	13	4043	0	4043
5	<b>Cost of Fertilizer &amp; Insecticide</b> (a) NPK/ Bio-fertilizer @ 50 gms/plant as basal dose = 25kg @ Rs.10/- per kg = Rs. 2500 (b) Urea/Vermicompost/Mo Phos/any other fertilizer @ Rs. 375.00 (c) Insecticide/ Bio insecticide @ 5 gms/plant x 2.5 kg @ Rs. 150/- per kg = Rs. 375/-	Jan/Apr	0	0	1500	1500
6	Casualty Replacement @ 10% (50 nos)	Jan/Apr	1.5	466.5	0	466.5
7	1st weeding & Moxoring	Aug/Sept	5	1555	0	1555

Sl No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Material Cost (In Rs.)	Total cost (In Rs.)
8	2nd Weeding, Soil working (1mt. diameter around the plants) & Manuring	Oct/Nov	8	2488	0	2488
9	Fire line tracing & Inspection path	Feb/Mar	3	933	0	933
10	Watch & Ward including watering as per requirement	Aug-Mar	8	2488	0	2488
Total			41.5	12906.5	7300.0	20206.5
<b>2nd Year Maintenance</b>						
1	Transportation of 50 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs.6/- per seedling	Jul	0.0	0.0	300.0	300.0
2	Casualty replacement	Jul	1.5	466.5	0.0	466.5
3	Cost of Fertilizer & Insecticide: A) Cost of Insecticide/ Bio-pesticide (Thimmet/ Furate) @ 5 gms/plant = 25 Kg @ Rs.150/- per kg = Rs.37.50 B) Urea/NPK/Bio-fertilizer/Vermicompost/Mu Khata/any other fertilizer= Rs.1400/-	July/Aug	0	0	1437.5	1437.5
4	Weeding (Complete weeding), Manuring & Soil working, (1mt. diameter around the plants)	Sep/Oct	8	2488	0	2488
5	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
6	Watch & Ward including watering as per requirement	Apr/Mar	12	3732	0	3732
Total			24.5	7619.5	1737.5	9357
<b>3rd Year Maintenance</b>						
3	Cost of Fertilizer Urea/NPK/Bio-fertilizer/Vermicompost/Mu Khata/any other fertilizer= Rs. 1400/-	July/Aug	0	0	1400.0	1400.0
4	Weeding (Complete weeding), Manuring & Soil working, (1mt. diameter around the plants)	Sep/Oct	8	2488	0	2488
5	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
6	Watch & Ward including watering as per requirement	Apr/Mar	12	3732	0	3732
Total			23.0	7153.0	1400.0	8553.0
<b>4th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line) & Inspection path	Feb/Mar	3	933	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732	0	3732
Total			15	4665	0	4665
<b>5th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3.0	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0	4665
<b>6th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0.0	4665.0
<b>7th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0.0	4665.0
<b>8th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length) & cultural operation	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0.0	4665.0
<b>9th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0.0	4665.0
<b>10th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward including watering as per requirement	Apr/Mar	12	3732.00	0	3732
Total			15.0	4665.0	0.0	4665.0

Year-wise Abstract of Cost Norm (showing seedling cost separately)

Matrix for Model II A (ANRSSGO Plants/Ha)

Sl. No.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	Total Cost	
	Base Month	13400	48871	12316	8100	4800	8800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800		
1	2023-23	14400	51315	78177	20300	5834	6226	6432	6754	7050	7446	7819											136058	
2	2023-23		24070	51881	10256	10818	8128	6042	6254	7082	7447	7818	8110											142904
3	2023-24			14774	26175	14959	11256	6432	6254	7050	7447	7819	8209	8671										150051
4	2024-25				15511	59404	13723	11927	5734	7092	7447	7819	8210	8619	9052									157554
5	2025-26					18189	82374	16500	12523	7082	7447	7819	8210	8623	9050	9405								165403
6	2026-27						17100	65492	17328	13149	7447	7819	8210	8623	9052	9403	9880							173705
7	2027-28							17958	88768	18184	13806	7819	8210	8623	9052	9403	9878	10479						182190
8	2028-29								18856	77208	19104	14486	8210	8623	9052	9404	9880	10479	11003					191510
9	2029-30									19799	75816	20052	13323	8623	9052	9505	9980	10479	11001	11553				201086
10	2030-31										20769	79607	21082	15580	9052	9505	9980	10479	11001	11553	12171			211541

In Rupees

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ARCCF (Forest Diversion & NO. FC Act)

**BASE COST NORM FOR COMPENSATORY AFFORESTATION (BLOCK PLANTATION)**  
**@ 1000 PLANTS PER HECTARE (18 months old seedling)**

**WAGE RATE Rs. 311/- PER MANDAY**

Sl No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Material Cost (In Rs.)	Total cost (In Rs.)
1	2	3	4	5	6	7
<b>0th Year (Advance work) Pre-Planting Operation</b>						
1	Survey, Demarcation and Pillar posting	Nov/Dec	2	622	0	622
2	Preparation of Treatment Map (Digital Map)	Nov/Dec	1	311	100	411
3	Site preparation (Cleaning & removal of debris)	Nov/Dec	12	3732	0	3732
4	Creation of 4.00 mt wide Inspection Path	Feb/Mar	1	311	0	311
5	Alignment and stacking of pits	Feb/Mar	1	311	0	311
6	Digging of pits (45 cm x 45 cm X 45 cm) in hard and gravelly soil	Feb/Mar	40	12440	0	12440
7	Construction of Temporary Labour Shed, Drinking water facility and First-Aid etc.	Jan/Mar	0	0	3500	3500
	<b>Total</b>		<b>57</b>	<b>17727</b>	<b>3600</b>	<b>21327</b>
<b>1st Year/Planting Year</b>						
1	Refilling of pits by altering the dugout soil of the pits, application of organic compounds/ CDM/ FYM & mixing the same properly.	Jun/Jul	7.5	2332.50	5000	7332.50
2	Transportation of 18 months old polythene bag seedlings in hired truck /tractor from the Permanent/Mega nursery to planting site including loading & unloading. (Average lead of 10 Rkm) & stacking the seedling @ Rs.6/- per Seedling. (1300 nos.)	Jul/Aug	0	0	6600	6600
3	Watering polypot seedlings at planting site	Jul/Aug	2	622	0	622
4	Conveyance of polypot seedlings on head load from the stacking site to individual dugout pits within the planting site, applying Insecticide, fertilizers & planting after scooping the soil with other applied materials & pressing the soil perfectly around the planted seedlings.	Jul/Aug	22.5	6997.50	0	6997.50
5	Cost of Fertilizer & Insecticide: (a) NPK/Bio-fertilizer @ 50 gms/plant as basal dose = 50kg @ Rs.30/- per kg = Rs. 1500.00 (b) Urea/Vermicompost/Mo Khata/any other fertilizer in two subsequent doses @ Rs. 750.00 (c) Insecticide/ Bio-pesticide @ 5 gms./plant+5 kg @ Rs.150/- per kg = Rs. 750.00	Jul/Aug	0	0	3000	3000
6	Casualty Replacement @ 10% (100 nos.)	Jul/Aug	2.5	777.5	0	777.5
7	1st weeding & Manuring	Aug/Sept	12	3732	0	3732
8	2nd Weeding, Soil working (1mt. diameter around the plants) & Manuring	Oct/Nov	15	4665	0	4665
9	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
10	Watch & Ward including watering as per requirement	Apr-Mar	12	3732	0	3732
	<b>Total</b>		<b>76.50</b>	<b>23791.50</b>	<b>14600.00</b>	<b>38391.50</b>
<b>2nd Year Maintenance</b>						
1	Transportation of 100 seedlings from Nursery to plantation site including loading, unloading & conveyance by Tractor @ Rs.6/- per seedling	Jul	0	0	600	600
2	Casualty replacement- 10%	Jul	2.5	777.5	0	777.5
3	Cost of Fertilizer & Insecticide: A) Cost of Insecticide/ Bio-pesticide @ 5 gms./plant = 0.5 kg @ Rs.150/- per kg = Rs.75/- B) Urea/NPK/Bio-fertilizer/Vermicompost/Mo Khata/any other fertilizer @Rs. 2000/-	July/Aug	0	0	2875	2875
4	Weeding (Complete weeding), Manuring & Soil working (1mt. diameter around the plants)	Sep/Oct	15	4665	0	4665
5	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
6	Watch & Ward including watering as per requirement	Apr-Mar	18	5598	0	5598
7	Maintenance of Temporary Labour Shed, Drinking water facility and First Aid etc.	Apr-Mar		0	1000	1000
	<b>Total</b>		<b>38.5</b>	<b>11973.5</b>	<b>4475</b>	<b>16448.5</b>

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Sl. No	Items of work	Preferable Period of Execution	No of Man-days	Labour Cost (In Rs.)	Material Cost (In Rs.)	Total cost (In Rs.)
1	2	3	4	5	6	7
<b>3rd Year Maintenance</b>						
1	Cost of Fertilizer (Urea/NPK/Bio-fertilizer/Vermicompost/Ms Khata/any other fertilizer)	July/Aug	0	0	2000	2000
2	Weeding (Complete weeding), Manuring & Soil working (1 mt. diameter around the plants)	Sep/Oct	15	4665	0	4665
3	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
4	Watch & Ward including watering as per requirement	Apr/Mar	10	5598	0	5598
5	Maintenance of Temporary Labour Shed, Drinking water facility and First Aid etc.	Apr/Mar	0	0	1000	1000
<b>Total</b>			<b>36.0</b>	<b>11196</b>	<b>3000</b>	<b>14996</b>
<b>4th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m long) including maintenance of inspection path	Feb/Mar	3	933	0	933
2	Watch & Ward including maintenance of vegetative lining	Apr-Mar	10	5598	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>
<b>5th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr/Mar	10	5598.00	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>
<b>6th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933.0
2	Pruning of branches, Staking out of multiple shrubs	Jan/Mar	3	933.00	0	933.0
3	Watch & Ward	Apr/Mar	10	5598.00	0	5598.0
<b>Total</b>			<b>24</b>	<b>7464</b>	<b>0</b>	<b>7464.0</b>
<b>7th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr/Mar	10	5598.00	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>
<b>8th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr/Mar	10	5598.00	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>
<b>9th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933.00	0	933
2	Watch & Ward	Apr/Mar	10	5598.00	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>
<b>10th Year Maintenance</b>						
1	Fire line tracing (2 m. wide fire line over 400 m length)	Feb/Mar	3	933	0	933
2	Watch & Ward	Apr/Mar	10	5598.00	0	5598
<b>Total</b>			<b>21</b>	<b>6531</b>	<b>0</b>	<b>6531</b>

Year wise Abstract of Cost (Not showing seedling cost separately)

Sl No	Items of work	Preferable Period of Execution	No of Mandays	Labour Cost (In Rs.)	Material Cost (In Rs.)	Total cost (In Rs.)	
1	2	3	4	5	6	7	
Sl No	Year	No. of Mandays	Labour cost (In Rs)	Material Cost(In Rs.)	Monitoring, Evaluation, Learning, Documentation and Other Contingency (5%) of (4+5)	Cost of Seedlings @Rs.50.31 per seedlings	TOTAL COST(In Rs)
1	2	3	4	5	6	7	8
1	0th year	57.0	17727.0	3600.0	973.00	0.00	22300.00
2	1st year	76.5	23791.5	14600.0	1918.50	55341.00	95651.00
3	2nd year	38.5	11971.5	4475.0	821.50	5031.00	22301.00
4	3rd year	36.0	11196.0	3800.0	749.00	0.00	15745.00
5	4th year	21.0	6531.0	0.0	326.00	0.00	6857.00
6	5th year	21.0	6531.0	0.0	326.00	0.00	6857.00
7	6th year	24.0	7464.0	0.0	373.00	0.00	7837.00
8	7th year	21.0	6531.0	0.0	326.00	0.00	6857.00
9	8th year	21.0	6531.0	0.0	326.00	0.00	6857.00
10	9th year	21.0	6531.0	0.0	326.00	0.00	6857.00
11	10th year	21.0	6531.0	0.0	326.00	0.00	6857.00
<b>Total:</b>		<b>358.0</b>	<b>111338.0</b>	<b>26475.0</b>	<b>6791.0</b>	<b>60372.0</b>	<b>204976.0</b>

**Note:**

- 1 Priority must be given to the indigenous local species available nearby to the site of plantation.
- 2 10% indigenous fruit bearing trees must be preferred in plantation.
- 3 Site specific Soil conservation work like LBCD, Gully Plugging, Staggered Trench, Contour Trench, Graded Bund, etc. may be taken up.
- 4 Chain link fencing can be adopted in the CA plantation taken up outside the forest area and Bamboo twigs fencing may be preferred.
- 5 Watering facilities for procurement of water & watering may be adopted as per the availability of water.
- 6 The Cost Norm of various items can be changed with the approval of the concerned RCCFs keeping the overall cost norm fixed for each Financial Year.

  
 APCCF (Forest Diversion & NO, FC Act)



SMC Works Model-C			
Cost Norms for creation of Compensatory Afforestation with Stabilization of Soil & Conservation of Moisture (1000 Plants/ Ha.)			
WAGE RATE Rs- 311/- PER DAY			
Sl.No	Item of Works	Preferable Period of Execution	Total Cost
0th Year (Pre-Planting Operation)			
1	Nil		0
1st Year			
2	Soil Conservation measure structures like Staggered Trench, Percolation pit, Contour trench, Graded earthen bund, LBCD, Wire mesh LBCD, Sub surface Dyke & WHS as per the slope & site requirement on LS	Apr/Sept.	20,215
2nd Year			
3	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
3rd Year			
4	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
4th Year			
5	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
4th Year			
5	Maintenance of SMC structures @ 15 % of initial year cost	Apr/Jul	3,032
<b>Total</b>			<b>32,343.0</b>

Abstract					
Sl. No	Year	No. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.)
1	0th year	0.0	0.0	0.0	0.0
2	1st year	0.0	0.0	20,215.0	20,215.00
3	2nd year	0.0	0.0	3,032.00	3,032.00
4	3rd year	0.0	0.0	3,032.00	3,032.00
5	4th year	0.0	0.0	3,032.00	3,032.00
6	5th year	0.0	0.0	3,032.00	3,032.00
<b>Total</b>		<b>0.00</b>	<b>0.00</b>	<b>32,343.0</b>	<b>32,343.0</b>

Different types of SMC structures may be taken up as per the scope & requirements of the plantation site out of the design & specification of different structures annexed along this document

  
 APCCF (Forest Diversion & NG, FC Act)

Matrix for (SMC)

Sl. No.	Compliance Month Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
	Base Month	0	3032	3032	3032	3032	3032											35613
1	2021-22	0	2126	3342	3510	3685	3870											37415
2	2022-23	0		2237	3509	3686	3869	4054										39284
3	2023-24			0	23401	3684	3870	4062	4267									41348
4	2024-25				0	24371	3868	4064	4265	4480								43310
5	2025-26					0	25832	4061	4267	4478	4704							45475
6	2026-27						0	27090	4264	4480	4702	4920						47740
7	2027-28							0	28445	4477	4704	4937	5186					50126
8	2028-29								0	29887	4701	4939	5184	5443				52842
9	2029-30									0	31340	4936	5186	5443	5717			55274
10	2030-31										0	32918	5183	5443	5715	6003		

*[Signature]*  
APCCS (Forest Diversion & NO, FC Act)

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**Fencing Model F-1**

**Fencing for Compensatory Plantation raised inside the Forest Areas using Bamboo Twigs & Thorns**

**WAGE RATE Rs. 311/- PER DAY**

Sl. No	Items of work	Preferable Period of Execution	Man days	Wages	Material cost (Rs)	Total Cost (Rs. per Ha.)
<b>0th Year Maintenance</b>						
1	NIL		0	0	0	0
<b>1st Year Maintenance</b>						
1	Taking an average perimeter of 250 Km/2Ha @ 4.185/mt. (Half bundle Bamboo Twigs/mt @ 120/Bundle) Labour Material = 40.60 (approx)	Sept./Oct	30	9330	14133	23463.0
2	Bamboo poles 24" height at a distance of 2mt spacing in or feed (2" under soil & 2" above soil) 250/2 = 125*1 = 126 Nos. of Bamboo Poles 1 Bamboo (approx) 24" height = 3 poles 126/3 = 42 Bamboos @ 200/Bamboo	Sept./Oct		0	8400	8400.0
3	Preparation of Bamboo poles, Digging of holes of 2 ft. depth & fixing Bamboo poles @ 20 poles/MT	Sept./Oct	6.5	2021.5		2021.5
4	Cost of Bamboo for tying the Bamboos together with double side two strand Bamboo batten (One 6" above ground and other one 4 ft. above ground) (250*2)/ 24 = 21 Bamboos @ 200/ Bamboo	Sept./Oct		0	4200	4200.0
5	Making Bamboo batten, Finishing the batten & Tying the same on double strand on Coir rope etc. @ Rs.11/ ftmt. Cost of coir rope @ Rs.0.125 kg/ Km	Sept./Oct	9	2799		2799.0
6	500x 0.125 kg = 62.5 kg @ Rs.70/Kg	Sept./Oct		0	4375	4375.0
7	Making one Bamboo Twigs gate with Bamboo frame			0	500.5	500.5
<b>TOTAL</b>			<b>45.5</b>	<b>14150.5</b>	<b>31608.5</b>	<b>45759.0</b>
Rate per running mt. 45759/ 250 = 183/Rmt						
<b>2nd Year Maintenance</b>						
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	1500	7720
Rate per running mt. 7720/ 250 = 30.88 or say Rs. 31-Rmt						
<b>3rd Year Maintenance</b>						
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
Rate per running mt. 11895/ 250 = 47.58 or say Rs. 48-Rmt						
<b>4th Year Maintenance</b>						
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
Rate per running mt. 11895/ 250 = 47.58 or say Rs. 48-Rmt						
<b>5th Year Maintenance</b>						
1	Repair & Maintenance of Bamboo Twigs fence including Material cost	Feb./Mar	20	6220	5675	11895
Rate per running mt. 11895/ 250 = 47.58 or say Rs. 48-Rmt						

**Abstract**

Sl. No	Year	Na. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.)
1	0th year	0.0	0.0	0.0	0.0
2	1st year	45.5	14150.5	31608.3	45759.0
3	2nd year	20.0	6220.0	1500.0	7720.0
4	3rd year	20.0	6220.0	5675.0	11895.0
5	4th year	20.0	6220.0	5675.0	11895.0
6	5th year	20.0	6220.0	5675.0	11895.0
<b>Total:</b>		<b>125.5</b>	<b>39030.5</b>	<b>50133.5</b>	<b>89164.0</b>

  
 APCCF (Forest Diversion & NO, FC Act)

Matrix for Model-F-1 Fencing (Bamboo Twig)

Sl. NO.	Commence ment Year	I	II	III	IV	V	VI	VII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
	Base Norm	0	65759	7720	11895	11895	11895										
1	2021-22	0	48047	8511	13770	14458	15181										99967
2	2022-23		0	50449	8937	14458	15181	15945									104966
3	2023-24			0	52971	9384	15182	15940	16737								110214
4	2024-25				0	55620	9853	15941	16737	17574							115725
5	2025-26					0	58401	16739	17574	18453							121512
6	2026-27						0	10853	17575	18453	19276						127588
7	2027-28							64387	11406	18454	19276	20145					133948
8	2028-29							0	67606	11976	19277	20240	21362				140666
9	2029-30								0	70286	12575	20346	21362	22430			147698
10	2030-31									0	74535	21363	21363	22430	23552		155284

*V. V. V.*

APCCF (Forest Diversion & NO. FC Act)

**Watering Model-W-I**

**Watering provision to CA Plantation**

**Solar system with Bore well (1 system for 5 Ha Plantation) fitted with Drip system, Wage rate @ Rs.311/-**

**Year of Installation (0th Year)**

1	Cost of Borewell	1,50,000	
2	Installation of Solar panel & other System	300,000	
3	Cost of 0.5 HP submersible motor with accessories	50,800	
4	Water Storage Tanks/ Flexible pipes	15,000	
5	Cost of laying Drip system including all accessories, fittings etc. with 12% GST	3,02,431	
<b>Total</b>		<b>8,17,431</b>	
6	Cost of Water & watering per Ha. (8,17,431/ 5) = Rs. 1,63,486/-		1,63,486
<b>1st Year Watering</b>			
7	No maintenance required		0
			<b>Total</b>
<b>0</b>			
<b>2nd Year Watering</b>			
8	Maintenance of system @ 5% of initial cost of installation		8,174
			<b>Total</b>
<b>8,174</b>			
<b>3rd Year Watering</b>			
9	Maintenance of system @ 5% of initial cost of installation		8,174
			<b>Total</b>
<b>8,174</b>			
<b>4th Year Watering</b>			
10	Maintenance of system @ 5% of initial cost of installation		8,174
			<b>Total</b>
<b>8,174</b>			
<b>5th Year Watering</b>			
11	Maintenance of system @ 5% of initial cost of installation		8,174
			<b>Total</b>
<b>8,174</b>			

**Abstract**

Sl. No	Year	No. person days	Labour cost @ Rs. 311/- per day	Material Cost	Total cost (Rs.)
1	0th year	0	0.0	163486.0	163486.0
2	1st year	0	0.0	0.0	0.0
3	2nd year	0	0.0	8174.0	8174.0
4	3rd year	0	0.0	8174.0	8174.0
5	4th year	0	0.0	8174.0	8174.0
6	5th year	0	0.0	8174.0	8174.0
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>196182</b>	<b>196182</b>

Matrix for Watering W1 (Solar Borewell) fitted with Drip System (per Ha)

In Rupees

Sl. NO.	Commencement Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	Total Cost
	Base Norm	153486	0	8174	8174	8174	8174											
1	2021-22	153486	0	9011	9463	9935	30758											222653
2	2022-23		171860	0	9462	9936	10432	32795										232785
3	2023-24			180043	0	9935	10433	10954	35811									245478
4	2024-25				189235	0	10432	10955	11502	35507								257751
5	2025-26					155718	0	10954	11503	12077	12687							270639
6	2026-27						208654	0	11502	12078	12681	39234						284171
7	2027-28							215087	0	12077	12682	13315	41219					298380
8	2028-29								230041	0	12681	13316	13981	43280				313295
9	2029-30									241343	C	13315	13982	14680	45444			328904
10	2030-31										253620	0	13581	14881	15414	47736		345412

*[Signature]*  
 APCCF (Forest Division & NO, FC Act)

1.	Name of Office	Bhubaneswar
2.	State/District/Forest Division to which the proposal relates	Odisha/ Sundargarh/ Sundargarh Forest Division
3.	Name of User Agency, nature of proposal	Project Officer, Kufda OCP, Basundhara Area, MCL.
4.	Nature and category of proposal	Mining
5.	Proposal number	FP/OR/MIN/50293/2020
6.	Extent of forest area involved	134.69 Ha
7.	Whether original or extension	Na
8.	If extension of lease, please clarify if proposal involves additional forest area and if so, specify.	Na
9.	Date of 1st Stage clearance	Di. 10.07.2025
	<b>Extent of CAMPA charges, head wise viz.:</b>	
	(a) Compensatory Afforestation	Rs. 10,99,09,200 /-
	(b) Additional Compensatory Afforestation	Na
	(c) Penal Compensatory Afforestation	Na
	(d) Catchment Area Treatment	Na
	Wildlife Management Plan	Na
	(e) i) Site Specific Wildlife Conservation Plan	Rs. 11,15,12,000 /-
	ii) Regional Wildlife Management Plan	Na
	iii) Cost of Dwarf Plantation Scheme	Na
	(f) Additional charges for diversion of area falling under notified/protected areas	Na
	(g) Net Present Value	Rs. 16,54,78,787 /-
10.	Any other charges/levies (Please specify)	
	i) Penal NPV	Na
	ii) Safety Zone	Na
	iii) 1.5 times Safety Zone	Na
	iv) Scheme for Gap plantation and soil moisture conservation activities within 100 mtr. from ML boundary.	Rs. 27,62,412 /-
	v) Interest on belated payment of NPV	Na
	Total	Rs. 38,96,62,399/-
11.	Whether payment made through challan or otherwise. In case of online payment, details of challan.	Challan and online payment.

Sl. No.	Type of deposit (NPV/CA/ IWMP/ Others (specify))	Whether by RTGS/DD/ NEFT (Specify)	UTR/ DD No.	Amount deposited (Rs.)	Date of deposit	Name of Bank from which amount transferred to account of CAF	Bank Account of CAF managed by CAMPA in which fund deposited
i)	NPV	NEFT	UTR No. SBINR 52025082696596623	165478787	26.08.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293737 IFSC Code- UBIN0996335
ii)	Interest on belated payment of NPV	Nil	Nil	Nil	Nil	Nil	Nil
iii)	Compensatory Afforestation Scheme	NEFT	UTR No. SBINR 52025082696596623	109909200	26.08.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293737 IFSC Code- UBIN0996335
iv)	Differential amount of CA Scheme	Nil	Nil	Nil	Nil	Nil	Nil
v)	Site Specific Wildlife Conservation Plan	NEFT	UTR No. SBINR 52025071892582223	111512000	18.07.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293440 IFSC Code- UBIN0996335
vi)	Regional Wildlife Management Plan	Nil	Nil	Nil	Nil	Nil	Nil
vii)	1.5 times Safety Zone etc.	Nil	Nil	Nil	Nil	Nil	Nil
viii)	Dwarf species Plantation	Nil	Nil	Nil	Nil	Nil	Nil
ix)	Scheme for Gap plantation	NEFT	UTR No. SBINR 5202511405860265	2762412	14.11.2025	State Specific CAMPA, Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293283 IFSC Code- UBIN0996335

Date:

Place: Sundargarh



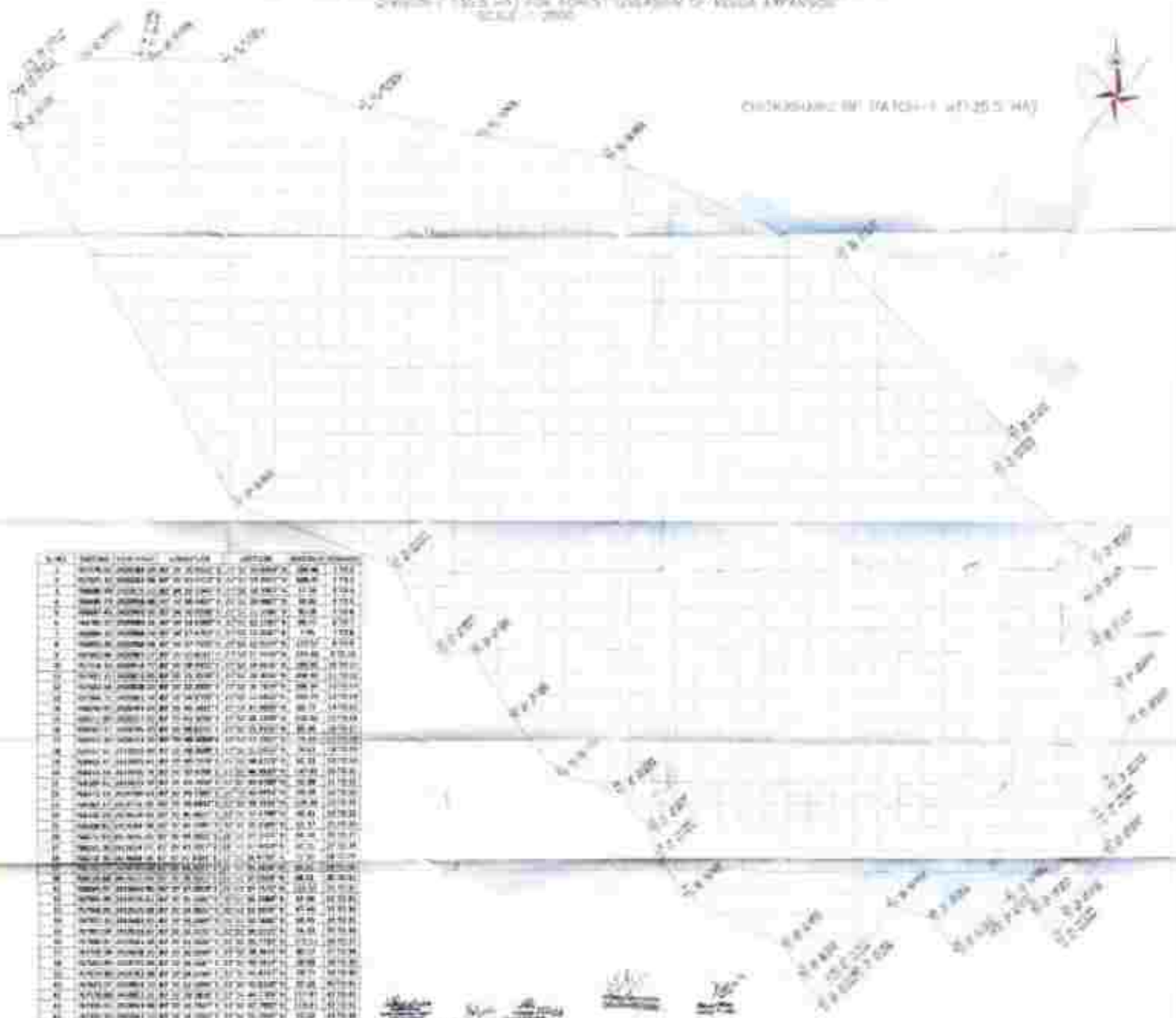
DISTRICT FOREST OFFICER  
SUNDARGARH FOREST DIVISION





PLAN OF LAND EXCHANGE BETWEEN THE NORTHERN RANGE SUBBOWEN AGENCY  
 DIVISION 7 (S.S. 2-4) FOR ACRES ACQUISITION OF LAND EXPANSION  
 SCALE: 1:2000

CHICKASAW COUNTY (S.S. 2-4) (S.S. 2-4)



NO.	SECTION	TOWNSHIP	RANGE	ACRES	REMARKS
1	1-1000	10N	10W	100.00	100.00
2	1-1001	10N	10W	100.00	100.00
3	1-1002	10N	10W	100.00	100.00
4	1-1003	10N	10W	100.00	100.00
5	1-1004	10N	10W	100.00	100.00
6	1-1005	10N	10W	100.00	100.00
7	1-1006	10N	10W	100.00	100.00
8	1-1007	10N	10W	100.00	100.00
9	1-1008	10N	10W	100.00	100.00
10	1-1009	10N	10W	100.00	100.00
11	1-1010	10N	10W	100.00	100.00
12	1-1011	10N	10W	100.00	100.00
13	1-1012	10N	10W	100.00	100.00
14	1-1013	10N	10W	100.00	100.00
15	1-1014	10N	10W	100.00	100.00
16	1-1015	10N	10W	100.00	100.00
17	1-1016	10N	10W	100.00	100.00
18	1-1017	10N	10W	100.00	100.00
19	1-1018	10N	10W	100.00	100.00
20	1-1019	10N	10W	100.00	100.00
21	1-1020	10N	10W	100.00	100.00
22	1-1021	10N	10W	100.00	100.00
23	1-1022	10N	10W	100.00	100.00
24	1-1023	10N	10W	100.00	100.00
25	1-1024	10N	10W	100.00	100.00
26	1-1025	10N	10W	100.00	100.00
27	1-1026	10N	10W	100.00	100.00
28	1-1027	10N	10W	100.00	100.00
29	1-1028	10N	10W	100.00	100.00
30	1-1029	10N	10W	100.00	100.00
31	1-1030	10N	10W	100.00	100.00
32	1-1031	10N	10W	100.00	100.00
33	1-1032	10N	10W	100.00	100.00
34	1-1033	10N	10W	100.00	100.00
35	1-1034	10N	10W	100.00	100.00
36	1-1035	10N	10W	100.00	100.00
37	1-1036	10N	10W	100.00	100.00
38	1-1037	10N	10W	100.00	100.00
39	1-1038	10N	10W	100.00	100.00
40	1-1039	10N	10W	100.00	100.00
41	1-1040	10N	10W	100.00	100.00
42	1-1041	10N	10W	100.00	100.00
43	1-1042	10N	10W	100.00	100.00
44	1-1043	10N	10W	100.00	100.00
45	1-1044	10N	10W	100.00	100.00
46	1-1045	10N	10W	100.00	100.00
47	1-1046	10N	10W	100.00	100.00
48	1-1047	10N	10W	100.00	100.00
49	1-1048	10N	10W	100.00	100.00
50	1-1049	10N	10W	100.00	100.00
51	1-1050	10N	10W	100.00	100.00
52	1-1051	10N	10W	100.00	100.00
53	1-1052	10N	10W	100.00	100.00
54	1-1053	10N	10W	100.00	100.00
55	1-1054	10N	10W	100.00	100.00
56	1-1055	10N	10W	100.00	100.00
57	1-1056	10N	10W	100.00	100.00
58	1-1057	10N	10W	100.00	100.00
59	1-1058	10N	10W	100.00	100.00
60	1-1059	10N	10W	100.00	100.00
61	1-1060	10N	10W	100.00	100.00
62	1-1061	10N	10W	100.00	100.00
63	1-1062	10N	10W	100.00	100.00
64	1-1063	10N	10W	100.00	100.00
65	1-1064	10N	10W	100.00	100.00
66	1-1065	10N	10W	100.00	100.00
67	1-1066	10N	10W	100.00	100.00
68	1-1067	10N	10W	100.00	100.00
69	1-1068	10N	10W	100.00	100.00
70	1-1069	10N	10W	100.00	100.00
71	1-1070	10N	10W	100.00	100.00
72	1-1071	10N	10W	100.00	100.00
73	1-1072	10N	10W	100.00	100.00
74	1-1073	10N	10W	100.00	100.00
75	1-1074	10N	10W	100.00	100.00
76	1-1075	10N	10W	100.00	100.00
77	1-1076	10N	10W	100.00	100.00
78	1-1077	10N	10W	100.00	100.00
79	1-1078	10N	10W	100.00	100.00
80	1-1079	10N	10W	100.00	100.00
81	1-1080	10N	10W	100.00	100.00
82	1-1081	10N	10W	100.00	100.00
83	1-1082	10N	10W	100.00	100.00
84	1-1083	10N	10W	100.00	100.00
85	1-1084	10N	10W	100.00	100.00
86	1-1085	10N	10W	100.00	100.00
87	1-1086	10N	10W	100.00	100.00
88	1-1087	10N	10W	100.00	100.00
89	1-1088	10N	10W	100.00	100.00
90	1-1089	10N	10W	100.00	100.00
91	1-1090	10N	10W	100.00	100.00
92	1-1091	10N	10W	100.00	100.00
93	1-1092	10N	10W	100.00	100.00
94	1-1093	10N	10W	100.00	100.00
95	1-1094	10N	10W	100.00	100.00
96	1-1095	10N	10W	100.00	100.00
97	1-1096	10N	10W	100.00	100.00
98	1-1097	10N	10W	100.00	100.00
99	1-1098	10N	10W	100.00	100.00
100	1-1099	10N	10W	100.00	100.00

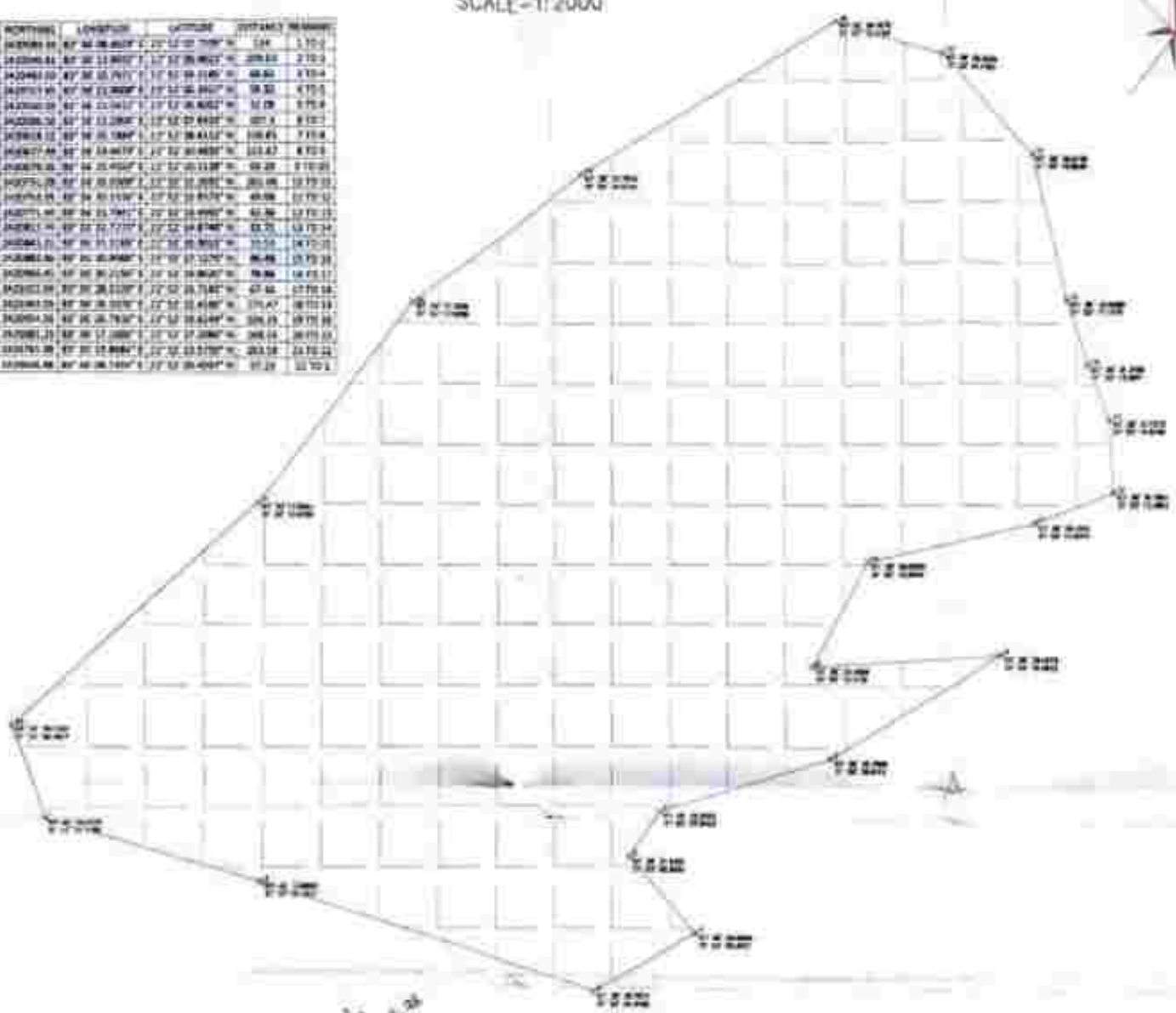




PLAN OF CA LAND CHITKIKHARU RF PATCH - 4 UNDER HEMGIR RANGE SUNDARGARH FOREST DIVISION (19.47 HA) FOR FOREST DIVERSION OF KULDA EXPANSION  
SCALE-1:2000



S. NO.	ENTRANCE	NORTHEAST	LONGITUDE	CURTITUDE	CONTINENT	REMARKS
1	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
2	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
3	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
4	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
5	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
6	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
7	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
8	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
9	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
10	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
11	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
12	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
13	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
14	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
15	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
16	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
17	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
18	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
19	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
20	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
21	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
22	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
23	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
24	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
25	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
26	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
27	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
28	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
29	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47
30	100000.00	19 47 00.00	77 32 00.00	77 32 00.00	19.47	19.47



  
 Forest Officer  
 Durgam Chitkikharu Section

  
 Range Officer  
 Hemgir Range

  
 GROUP OFFICER (Civil & Forest)  
 BANGSARHANA, KUDA

  
 DIVISIONAL FOREST OFFICER  
 BANGSARHANA FOREST DIVISION

Financial Outlay for Additional Compensatory Afforestation Scheme over an area of 135.5 ha of Degraded Reserve Forest land identified in Chitikikhadu RF Patch-1 under Hengir Forest Range of Sundargarh Forest Division to accommodate the plantation of balance seedlings against diversion of Kulda Expansion OCP of MCL as per matrix 2026-27 of approved One-time Cost Norm

Sl No.	Description	Amount (Rs.)
1.	Cost of ANR Plantation @ 500 Plant per ha over 135.5 ha @ Rs.1,73,705/- per ha with 10 years maintenance	2,35,37,028.00
2.	Cost of Bamboo Twig and Thorn fencing over 5280.88 RMT with 5 years maintenance @ Rs.1,27,588/- per 250 RMT/ ha (As proposed by DFO, Sundargarh Division)	26,95,108.00
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs.45,475/- per ha over 135.5 ha with 5 years maintenance	61,61,863.00
4.	Watering model W-1: Borewell fitted with Solar and Drip System for 67750 plants @ Rs.2,58,230/- per 1000 Plants (As proposed by DFO, Sundargarh Division)	1,74,95,083.00
	Total	4,98,89,082.00
5.	Add Escalation @ 10%	49,88,908.00
	<b>Grand Total</b>	<b>5,48,77,990.00</b> <b>or rounded off to</b> <b>5,48,78,000.00</b>

(Rupees Five Crore Forty Eight Lakhs and Seventy Eight Thousand) only

Approved



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

Principal Chief Conservator of Forests  
(Forest Diversion & Nodal Officer, FC Act)  
O/o the PCCF & Hoff, Odisha, Bhubaneswar

Financial Outlay for **Additional Compensatory Afforestation Scheme** over an area of 19.47 ha of **Degraded Reserve Forest** land identified in **Chitikikhadu RF Patch-2** under **Hemgir Forest Range** of **Sundargarh Forest Division** to accommodate the plantation of balance seedlings against diversion of **Kulda Expansion OCP of MCL** as per matrix 2026-27 of approved One-time Cost Norm

Sl. No.	Description	Amount (Rs.)
1.	Cost of AR Plantation @ 1000 Plant per ha over 19.47 ha @ Rs.2,99,567/- per ha with 10 years maintenance	58,32,569.00
2.	Cost of Bamboo Twig and Thorn fencing over 2112.91 RMT with 5 years maintenance @ Rs.1,27,588/- per 250 RMT/ ha (As proposed by DFO, Sundargarh Division)	10,78,328.00
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs.45,475/- per ha over 19.47 ha with 5 years maintenance	8,85,398.00
4.	Watering model W-I: Borewell fitted with Solar and Drip System for 19470 plants @ Rs.2,58,230/- per 1000 Plants (As proposed by DFO, Sundargarh Division)	50,27,738.00
	Total	1,28,24,033.00
5.	Add Escalation @ 10%	12,82,403.00
	<b>Grand Total</b>	<b>1,41,06,436.00</b> or rounded off to <b>1,41,06,500.00</b>

(Rupees One Crore Forty One Lakhs Six Thousand and Five Hundred) only

Approved



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

Principal Chief Conservator of Forests  
(Forest Diversion & Nodal Officer, FC Act)  
C/o the PCCF & HoFF, Odisha, Bhubaneswar

Financial Outlay for Additional Compensatory Afforestation Scheme over an area of 49.78 ha of Degraded Protected Forest land identified in Beheramunda PRF under Hengir Forest Range of Sundargarh Forest Division to accommodate the plantation of balance seedlings against diversion of Kulda Expansion OCP of MCL as per matrix 2026-27 of approved One-time Cost Norm

Sl. No.	Description	Amount (Rs.)
1.	Cost of AR Plantation @ 1000 Plant per ha over 49.78/ha @ Rs.2,99,567/- per ha with 10 years maintenance	1,49,12,445.00
2.	Cost of Bamboo Twig and Thorn fencing over 3055.33/ RMT with 5 years maintenance @ Rs.1,27,588/- per 250 RMT/ ha (As proposed by DFO, Sundargarh Division)	15,59,294.00
3.	Cost of SMC activities like staggered trenches, percolation pits, contour trench, graded earthen bund, LBCD, wire mesh LBCD, Sub-Surface Dyke and WHS as per the slope and site requirement @ Rs.45,475/- per ha over 49.78 ha with 5 years maintenance	22,63,746.00
4.	Watering model W-I: Borewell fitted with Solar and Drip System for 49780 plants @ Rs.2,58,230/- per 1000 Plants (As proposed by DFO, Sundargarh Division)	1,28,54,689.00
	Total	3,15,90,174.00
5.	Add Escalation @ 10%	31,59,017.00
	<b>Grand Total</b>	<b>3,47,49,191.00</b> <b>or rounded off to</b> <b>3,47,49,200.00</b>

(Rupees Three Crore Forty Seven Lakhs Forty Nine Thousand and Two Hundred) only

Approved

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

Principal Chief Conservator of Forests  
(Forest Diversion & Nodal Officer, FC Act)  
O/o the PCCF & Hoff, Odisha, Bhubaneswar

Financial Outlay for Additional Compensatory Afforestation Scheme over an area of 14 ha of Degraded DPF land identified in Tangarpali DPF under Ujalpur Forest Range of Sundargarh Forest Division to accommodate the plantation of balance seedlings against diversion of Kulda Expansion OCP of MCL as per matrix 2026-27 of approved One-time Cost Norm

Sl. No.	Description	Amount (Rs.)
1.	Cost of ANR Plantation @ 500 Plant per ha over 14 ha @ Rs.1,73,705/- per ha with 10 years maintenance	24,31,870.00
	Total	24,31,870.00
2.	Add Escalation @ 10%	2,43,187.00
	<b>Grand Total</b>	<b>26,75,057.00</b> or rounded off to <b>26,75,100.00</b>

(Rupees Twenty Six Lakhs Seventy Five Thousand and One Hundred) only

Approved



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

Principal Chief Conservator of Forests  
(Forest Diversion & Nodal Officer, FC Act)  
Office PCCF & NOff, Odisha, Bhubaneswar



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



[Phone No-06822-272243, E-Mail- dfo.sundargarh@odisha.gov.in]

Memo No. 2019 /4F (Misc) /Dated. 24/03/2026.

To

The Regional Chief Conservator, of Forests  
Rourkela Circle Rourkela

Sub:-

Proposal for diversion of 134.69 ha of forest land for Expansion of Kuldia Open Cast Coal Mining Project of Bauxitbharu Area of Mahanadi Coalfields Limited in Sundargarh District under Sundargarh Forest Division (Proposal No. FP/OR/MIN/50293/2020).

Ref:-

- 1) Stage-I approval orders of MoEF & CC, Govt of India, New Delhi dated. 10.07.2025.
- 2) Your Memo No. 660/3F, dated 18.02.2026.
- 3) Memo No. 3574, dated 17.02.2026 of the Dy. Conservator of Forests (Nodal), O/o the Pr.CCF & HoFF, Odisha, Bhubaneswar.

With reference to the subject cited above, necessary compliance on the discrepancies/shortcomings observed by the Dy. Conservator of Forests (Nodal), O/o the Pr.CCF & HoFF, Odisha, Bhubaneswar is furnished below.

(i) As per condition No.2(d) of Stage-I/in-principle approval Order dated.10.07.2025 of Gov. MoEF & CC, FC Division, New Delhi, the CA land has been identified over 280.90 ha of degraded forest land under the jurisdiction of Sundargarh Forest Division and the CA Scheme has been prepared based on one-time cost norm for planting 1,40,450 nos. of seedlings as against 2,80,900 nos. Seedlings. So, the balance seedlings of 1,40,450 nos. shall be planted either in identified degraded forest land or seedlings of 1,40,450 nos. shall be planted either in identified degraded forest land or additional RF/ PF may be identified to accommodate the balance seedlings. Accordingly, a revised CA scheme may be furnished vis-à-vis Govt clarification dated 13.01.2026.

In compliance to the above, an Additional Compensatory Afforestation Scheme for 218.75 ha in Chitkikhadu RF patch 1&2 (154.97 ha), Beheramunda PRF (49.78 ha) under Hemgir Range and Tangarpali DPF (14.0 ha) under Ujalpur Range of degraded forest land has been prepared for accommodation of the balance 1,40,450 nos. of seedlings. The Additional Compensatory Afforestation Scheme is enclosed herewith as **Annexure -I** for necessary action. The details of the CA Scheme is as detailed given below.

**Additional C.A. Scheme over 218.75 Ha of degraded Forest Land.**

SL No.	Name of Range	Name of the RF/PRF/DPF	Type of Land	Area in Ha.	Plants per Hectar	Total plants (in Nos.)	Financial outlay.
1	Hemgir	Chitkikhadu RF Patch-1	Degraded forest land	135.50	ANR @500	67,750	4,00,66,166.00
2	Hemgir	Chitkikhadu RF Patch-2	Degraded forest land	19.47	ANR @1000	19,470	89,32,770.00
3	Hemgir	Beheramunda PRF	Degraded forest land	49.78	ANR @1000	49,780	2,15,77,026.00
4	Ujalpur	Tangarpali DPF	Degraded forest land	14.00	ANR @500	7,000	24,31,870.00
				<b>218.75</b>		<b>1,44,000</b>	<b>7,30,07,832.00</b>

(ii). The 12 Point (CAMP) Format appended in the compliance report is incorrect, which may be rectified and re-submitted as per the corrected format enclosed.

The rectified 12 Point (CAMP) format is attached as Annexure-II for necessary action.

This is for favour of your information and necessary action.



Divisional Forest Officer  
Sundargarh Forest Division.

Memo No. 2014 4F (Misc) Dated. 24/03/2026.

Copy forwarded to the Principal Chief Conservator of Forests, Forest Division & Nodal Officer, FC Act, On the Principal Chief Conservator of Forests & HoFF, Odisha Bhubaneswar for favour of kind information and necessary action.



Divisional Forest Officer  
Sundargarh Forest Division.

Memo No. 2015 4F (Misc) Dated. 24/03/2026.

Copy forwarded to the Project Officer, Koldia OCP of Basundhara Area MCL, for information and necessary action.



Divisional Forest Officer  
Sundargarh Forest Division.



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

Memo No. 660 /3F(Misc)-873/2025 Date: 18.02.2026

To

The Divisional Forest Officer,  
Sundargarh Division.

Sub:

Proposal for diversion of 134.69 ha of forest land for Expansion of Kulda Open cast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh district of Sundargarh Forest Division.- Stage-I compliance observation regarding.


Ref:

Memo No.3574 Dtd.17.02.2026 of the Dy.CF(Nodal), O/o the PCCF, Odisha.

Enclosed, please find herewith the copy of Memo No. 3573 Dtd.17.02.2026 of the Dy.Conservator of Forests (Nodal), O/o the PCCF & HoFF, Odisha addressed to the undersigned and copy thereof endorsed to you in the next Memo of even date which is self explanatory.

In this context, you are requested to furnish the required point wise compliance to this office for taking further follow up action at this end.

**Encl: As above.**

  
**Regional Chief Conservator of Forests,  
Rourkela Circle**

Memo No. 661 Date: 18.02.2026

Copy forwarded to the Deputy Conservator of Forests (Nodal), O/o the Principal Chief Conservator of Forests & HoFF, Odisha for kind information and necessary action with reference to his Memo No.3573 Dtd.17.02.2026.

  
**Regional Chief Conservator of Forests,  
Rourkela Circle**

Memo No. 662 Date: 18.02.2026

Copy forwarded to the Chief Manager Mines, O/o the Project Officer, Kulda OCP, Basundhara Area of M/s Mahanadi Coalfields Limited for information and necessary action with reference to Memo No. 3575 Dtd.17.02.2026 of Dy.CF(Nodal), O/o the PCCF & HoFF, Odisha.

  
**Regional Chief Conservator of Forests,  
Rourkela Circle**



Office of the Project Officer  
Kulda Open Cast Project  
Basundhara Area  
AT/PO- Bilinga, Sundergarh  
Odisha-770076  
e-mail:po-kidp.mcl@coalindia.in

Ref.No. MCL/BA/PO/KOCP/2026-27/858

Date: 07.01.2026.

To  
The Divisional Forest Officer,  
Sundargarh Forest Division,  
Sundargarh, Odisha

**Sub:** Submission of compliance report on discrepancies pointed out during scrutiny of Stage-I compliance – Diversion of 134.69 ha forest land for Expansion of Kulda Open Cast Project, Basundhara Area, MCL.

**Ref:**

1. Memo No. 03 dt. 01.01.2026 of the Regional Chief Conservator of Forests, Rourkela Circle.
2. Your office letter No. 91/4F(M) dt. 07.01.2026.

Sir,

With reference to the subject and letters cited above, this is to submit the **point-wise compliance** to the discrepancies/shortcomings (Point No. 01 to 07) observed during scrutiny of the Stage-I compliance report in respect of the diversion proposal of **134.69 ha of forest land for Expansion of Kulda Open Cast Project** of Basundhara Area, Mahanadi Coalfields Limited.

The compliance is furnished as under:

**1. Undertakings for Condition No. 9(a), 9(b), 9(c) & 9(d):**

Separate undertakings have been obtained from the User Agency affirming that the schemes/plans prepared in compliance with Condition No. 9(a), 9(b), 9(c) and 9(d) of the Stage-I approval shall be implemented in consultation with and under the supervision of the State Forest Department  
(Enclosed as Annexure-I)

**2. Demarcation of Safety Zone (Condition No. 10(a)):**

The Safety Zone of 7.5 m width along the inner boundary of the mining lease area has been demarcated on ground under supervision. RCC boundary pillars with DGPS coordinates have been erected, and the area has been fenced/protected as per stipulations. The Safety Zone demarcation plan, land use plan, and list of DGPS coordinates are enclosed for verification.

(Enclosed as Annexure-II)

**3. Undertaking for Condition No. 10(c):**

An undertaking has been obtained from the User Agency confirming that the scheme prepared in compliance with Condition No. 10(c) shall be implemented strictly under the supervision of the State Forest Department.

(Enclosed as Annexure-III)

**4. Top Soil Management Plan (Condition No. 11):**

A detailed Top Soil Management Plan for Kulda OCP (Expansion) has been prepared in line with the

approved Mining Plan and Mine Closure Plan and submitted herewith for approval.

An undertaking has also been obtained from the User Agency committing to strict implementation of the approved Top Soil Management Plan without causing any damage to top soil during mining operations.  
(Enclosed as Annexure-IV)

**5. Undertaking for Condition No. 13:**

An undertaking has been obtained from the User Agency stating that the scheme for **desilting of village tanks and other water bodies located within 5 km of the mine lease boundary** shall be implemented under the supervision of the State Forest Department.

(Enclosed as Annexure-V)

**6. Uploading of Stage-I Compliance on PARIVESH Portal (Condition No. 32):**

The Stage-I compliance report has been uploaded on the **PARIVESH portal (<https://parivesh.nic.in>)** and a screenshot of the same is enclosed as documentary evidence.

(Enclosed as Annexure-VI)

**7. CAMPA Fund Details:**

Details of all funds deposited by the User Agency into the **CAMPA account** in respect of the instant project have been furnished in the prescribed CAMPA format, duly signed by the User Agency and countersigned.

(Enclosed as Annexure-VII)

In view of the above, it is respectfully submitted that all discrepancies/shortcomings pointed out by the Regional Chief Conservator of Forests, Rourkela Circle have been duly complied with. The compliance report along with requisite undertakings, plans, and enclosures is submitted for your kind verification and onward transmission to the competent authority.

Yours faithfully,

  
07/01/2024

Project Officer  
Kulda Open Cast Project  
Basundhara Area  
Mahanadi Coalfields Limited  
Sundargarh, Odisha

Encl: As stated above.

Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

## UNDERTAKING

(Condition No. 9(a))

### *Mitigative Measures for Soil Erosion & Choking of Streams*

It is hereby undertaken that Mahanadi Coalfields Limited (MCL), being the User Agency for diversion of 134.69 ha of forest land for **Kulda Expansion Open Cast Project**, shall implement all **mitigative measures to minimize soil erosion and choking of natural drains/streams** within the mining lease area.

The said measures shall be executed strictly as per the approved scheme, Mining Plan-cum-Mine Closure Plan, and in consultation with and under the supervision of the State Forest Department, within the stipulated period of three years from the date of Stage-II approval, as prescribed under **Condition No. 9(a)** of Stage-I Forest Clearance.

Date 04/01/2026

Place Kulda OCP

  
04/01/2026  
(Signature of User Agency)  
Official Seal  
Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER,  
SUNDARGARH FOREST DIVISION

## UNDERTAKING

(Condition No. 9(b))

### *Plantation of Drought Hardy Species & Sowing of Seeds*

It is hereby undertaken that the User Agency shall carry out **planting of adequate drought-hardy plant species and sowing of suitable seeds** in appropriate areas within the mining lease to arrest soil erosion.

The plantation and sowing activities shall be undertaken **strictly in accordance with the approved scheme, Mining Plan-cum-Mine Closure Plan and under the supervision of the State Forest Department, as mandated under Condition No. 9(b) of the Stage-I approval.**

Date...04/01/2026.....

Place...Kulda OCP.....

  
04/01/2026  
(Signature of User Agency)  
Project Officer  
Official Seal  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

## UNDERTAKING

(Condition No. 9(c))

### *Construction of Check Dams / Retention & Toe Walls*

It is hereby undertaken that the User Agency shall construct **check dams, retention walls and toe walls along contours** to arrest sliding and movement of excavated material.

The works shall be implemented as per the approved scheme, Mining Plan-cum-Mine Closure Plan, and under the supervision of the State Forest Department, in compliance with **Condition No. 9(c)** of the Stage-I Forest Clearance.

Date 04/01/2026

Place Kulda OCP

  
04/01/2026  
(Signature of User Agency)  
Project Officer  
Official Seal  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

## UNDERTAKING

(Condition No. 9(d))


### *Stabilization of Overburden Dumps*

It is hereby undertaken that the User Agency shall stabilize all overburden dumps by appropriate grading and benching so as to ensure that the angle of repose at any location does not exceed 28 degrees, as prescribed.

The stabilization work shall be carried out strictly in accordance with the approved scheme and under the supervision of the State Forest Department, in compliance with Condition No. 9(d) of Stage-I approval.

Date... 04/01/2026

Place... Kulda OCP

  
04/01/2026  
(Signature of User Agency)  
Project Officer  
Official Seal, Opencast Project  
परियोजना अधिकारी  
कुल्दा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNGARBARH FOREST DIVISION

**COORDINATES OF SAFETY ZONE BOUNDARY PILLARS OF KULDA OCP**

SL. NO	EASTING	NORTHING
S-1	783035.04	2437940.77
S-2	782868.43	2437867.66
S-3	782712.25	2437793.48
S-4	782510.90	2437702.86
S-5	782207.38	2437623.41
S-6	781993.45	2437681.01
S-7	781867.70	2437531.30
S-8	781865.74	2437411.57
S-9	781872.26	2437313.26
S-10	781689.29	2437194.67
S-11	781516.70	2437032.68
S-12	781453.13	2437046.97
S-13	781426.65	2437158.67
S-14	781420.20	2437238.17
S-15	781318.06	2437280.28
S-16	781177.20	2437239.12
S-17	781133.74	2437279.87
S-18	781142.75	2437421.47
S-19	780946.76	2437553.26
S-20	780840.52	2437610.96
S-21	780901.60	2437723.42
S-22	781025.20	2437784.74
S-23	781231.68	2437925.04
S-24	781325.04	2438027.28
S-25	781295.21	2438190.71
S-26	781496.65	2438529.74
S-27	781576.12	2438581.95
S-28	781618.04	2438590.98
S-29	781658.04	2438574.04
S-30	781646.09	2438624.05
S-31	781635.06	2438688.05
S-32	781627.07	2439092.04
S-33	781617.07	2439092.02
S-34	781637.17	2439252.73
S-35	781615.37	2439311.76
S-36	781587.98	2439364.12
S-37	781568.25	2439385.31
S-38	781551.17	2439399.40
S-39	781461.77	2439460.30
S-40	781423.65	2439492.66
S-41	781408.67	2439508.77
S-42	781400.33	2439523.63
S-43	781393.57	2439541.09
S-44	781388.65	2439561.92
S-45	781374.78	2439705.35

PROJECT OFFICER  
KOCF

*AD*  
Project Officer  
Kulda OCP  
12/10/2026



2023/01/01/2026  
 Project Officer  
 Kailash Opencast Project  
 परियोजना अधिकारी  
 किला परियोजना



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016



Sirmal, Odisha, India  
 Project Officer  
 Kula Opencast Project  
 14.02.2016

112  
 Project Officer  
 Kula Opencast Project  
 परियोजना अधिकारी



  
 Project Officer  
 Kulda Opencast Project  
 परियोजना अधिकारी

09/01/2026



  
 09/10/2016  
 Project Officer  
 Kulda Opencast Project  
 परियोजना अधिकारी  
 - कलदाज

## UNDERTAKING

(Condition No. 10(c))

### *Maintenance of Safety Zone as Green Belt*

It is hereby undertaken that the **Safety Zone (7.5 m strip)** around the mining lease shall be **maintained as a green belt** and regeneration activities shall be taken up to ensure development of a dense canopy.

All plantation, regeneration and maintenance activities in the Safety Zone shall be carried out at **project cost and under the supervision of the State Forest Department**, in compliance with **Condition No. 10(c) of the Stage-I Forest Clearance**.

Date 04/01/2026

Place Kulda OCP.

  
04/01/2026  
(Signature of User Agency)  
Project Officer  
Official Seal  
Kulda Opencast Project  
परिपोषणा अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

## UNDERTAKING

(Condition No. 11)

### *Proper Top Soil Management*

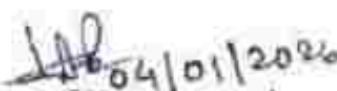
It is hereby undertaken that **Mahanadi Coalfields Limited (MCL)**, being the User Agency for diversion of **134.69 ha** of forest land for **Kulda Expansion Open Cast Project**, shall ensure that no **damage is caused to the top soil** during mining operations.

The topsoil generated during mining shall be **carefully stripped, separately stored and preserved in designated areas** to prevent erosion, degradation or loss of fertility. The preserved topsoil shall be **systematically and effectively utilized for reclamation, re-grassing and biological restoration** of mined-out and backfilled areas.

The entire activity shall be carried out **strictly in accordance with the approved Top Soil Management Plan** forming part of the approved Mining Plan-cum-Mine Closure Plan and **under the supervision of the State Forest Department**, in compliance with **Condition No. 11** of the Stage-I Forest Clearance.

Date...04/01/2026.....

Place...Kulda OCP.....

  
(Signature of User Agency)

Official Seal Project Officer  
Kulda Opencast Project  
परियोजना अधिकारी  
कुल्डा परियोजना

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION



## PLAN

For Top Soil Management for Kulda OCP  
(Extension) of Mahanadi Coalfield Limited,  
Basundhara Area



Prepared by

Project Officer,

Kulda OCP, Basundhara Area, Sundargarh, Odisha

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Compliance to Condition No.11 of "In Principle approval" orders for Online Proposal No  
FP/OR/MIN/50293/2020 dated 10.07.2025



## Plan for Top Soil Management for Kulda OCP (Extension) of Mahanadi Coalfield Limited, Basundhara Area

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### 1.0 Introduction:

**Kulda Mine** is a part of the Ib Valley coal mines, owned by Mahanadi Coalfields Limited. The mine has an expansion plan to increase capacity by an additional 5 million tones. In May 2022, a proposal to increase the mine's production capacity from 19.6 to 21 MTPA over the existing mining lease area was granted environmental clearance (EC). Accordingly the Mining Plan & Mine Closure Plan has been prepared and approved vide Letter no MCL/SBP/CS/BD-250/Exct/2022/12740/ dated 17.08.2022

In the process of expansion of Kulda Opencast Project the mining activities will be expanded from existing working area of 634.205 Ha to total lease area 921.305 ha i.e. additional area to be covered 295.62 ha. Out of 295.62 ha, 134.69 ha is of Forest land and balance 160.93 ha is of Non Forest Kisam.

The MCL authority, Basundhara Area has filed forest diversion proposal under provisions of *Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980* vide Proposal no FP/OR/ MIN / 50293/2020. After due consideration, the In-Principle approval orders has been issued by the MoEF&CC, Govt. of India, New Delhi dated 10.07.2025. There are set of stipulated conditions to be complied with prior to Stage-II approval orders. The Condition No 11 reads as follows.

**"No damage shall be caused to the top-soil and the user agency will follow the top soil management plan"**

This Plan is prepared to comply the condition no 11 of the in- principle approval orders as stated above.

### 2. Total Mining Area & Present Land Use Pattern:

The total Mining Lease area is 921.305ha which includes 354.06ha Forest Land and balance Non Forest Land. The village wise land details are furnished below.



Plan for Top Soil Management for Kulda OCP (Extension) of Mahanadi Coalfield Limited (MCL), Basundhara Area, Sundargarh, Odisha.

Sl No	Village	Forest Land in Ha			Non Forest Land in ha			G. Total in Ha
		RF	Rev. Forest	Total	Non Forest (Govt.)	Pvt.	Total	
1	Kulda		77.56	77.56	26.87	50.59	77.46	195.02
2	Bankibahal		87.44	87.44	12.06	78.52	90.58	178.02
3	Balinga		4.97	4.97	36.73	110.80	147.53	152.5
4	Tumulia		35.81	35.81	32.33	86.61	118.94	154.75
5	Siarmal		68.55	68.55	1.21	27.22	28.43	96.98
6	Lamia RF	88.25	0	88.25	0	0	0	88.25
Total		88.25	274.33	362.58	109.20	353.74	462.94	825.51
Area outside the Lease		0	0	0	99.99	4.33	104.32	104.32
Total		88.25	274.33	362.58	209.19	358.07	567.26	929.83
Re-diverted Forest area				(-)8.52				(-) 8.52
G. Total				354.06	209.19	358.07	567.26	921.305

The total forest area involved in Kulda OCP is 362.58 ha (this includes 8.52 ha of Forest land re-diverted for Basundhara Washery Purpose). Out of 362.58 ha the stage-II forest clearance has been obtained for 227.89 ha vide Order F.No 8-176/1997-FC Dated 08.08.2007 from MoEF&CC, New Delhi. For balance forest area i.e. 134.69 ha diversion proposal has been filed vide Proposal No FP/ OR/MIN/ 50293/2020 and in-principle approval orders has been issued.

The present Land use pattern / and after expansion, the land use pattern as proposed in the Approved Mining Plan is given below.

Sl No	Land Use	At Preset in Ha			Due to Expansion			G. Total
		Forest	Non Forest	Total	Forest	Non Forest	Total	
1	Quarry Excavation area	187.16	134.755	321.915	110.92	107.15	218.07	539.985
2	Infrastructure including Safety Zone and Embankment	36.615	115.178	151.793	9.84	49.28	59.12	210.913
3	External dump	4.12	156.382	160.502	13.93	4.50	18.43	178.932
4	Total	227.895	406.315	634.210	134.69	160.93	295.62	929.83



S	Redirected for Washery	(-)8.52	0	(-)8.52				
	<b>Total</b>	<b>219.375</b>	<b>406.315</b>	<b>625.69</b>	<b>134.69</b>	<b>160.93</b>	<b>295.62</b>	<b>921.305</b>

### 3. Top Soil Generation:

In the expansion process 295.62 ha of land will be utilized for Quarry Excavation – 218.07ha, External Dump- 18.43 ha and Balance- 59.12 ha for Infrastructure including Safety Zone and Embankment.

#### Depth of Top Soil:

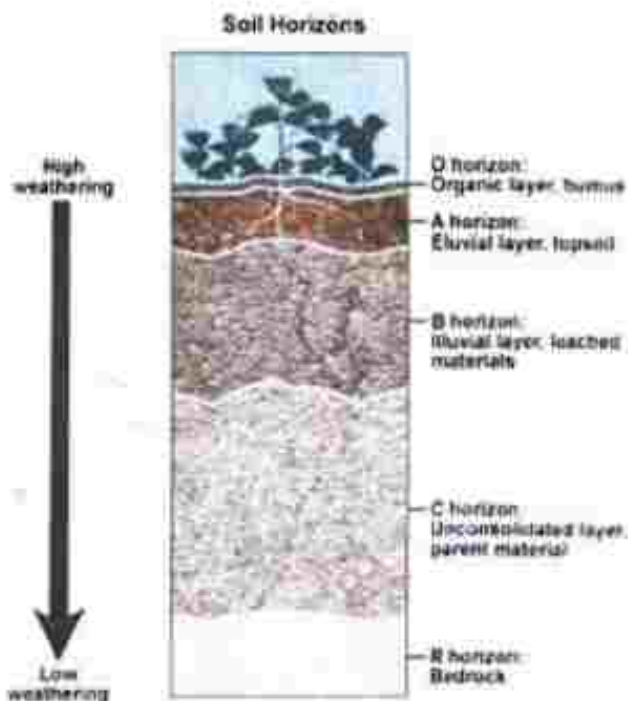
Depth of top soil depends on following:

- Physiography.
- Climatic conditions like temperature, rainfall etc.
- The uses to which the land has been put before.

The soil analysis data available for adjacent Basundhara block reveals that the thickness of top soil varies from 250 to 300 mm. The Soil Profile of Basundhara Area (Sandy Loamy Soil) is furnished below. It also corroborates with the finding that the top soil is confined to 25 – 30 cm from top level.

In the Approved Mining Plan, the guiding principle for scrapping of Top soil the following principles have been led out.

- As the major part of the area is covered with dense vegetation, the soil should be ripped, dozed and loaded after clearing vegetation.
- Soil should be scraped separately, so that it is not mixed in OB rock.
- The soil from the foundation ground should be scrapped before starting of OB dumping.





### 3.1 Estimation of Top Soil likely to be generated:

Considering the top soil depth 0.30m (30cm), the top soil likely to be generated is 0.79Mcum as furnished below.

Sl No	Area likely to generate Top Soil		Depth of Top Soil in m	Top soil to be generated in Mcum	Year wise Top soil production (in Mcum)			
	Land use	Area in Ha			1 <sup>st</sup> Yr	2 <sup>nd</sup> & 3 <sup>rd</sup> yr	4 <sup>th</sup> & 5 <sup>th</sup> Yr	beyond
1	Excavation	218.07	0.30	0.654	0.058	0.124	0.116	0.356
2	OB Dump	18.43	0.30	0.0553	0.005	0.011	0.010	0.030
	S. Total	236.50	0.30	0.7093	0.063	0.135	0.126	0.386
3	Embankment & Infrastructure #	26.84	0.30	0.0805	0.007	0.015	0.014	0.044
	Total	263.34	0.30	0.790	0.070	0.15	0.14	0.43

# Safety Zone area has not been included as it will be maintained under vegetation.

### 3.2 Scrapping & Storage:

**Methodology of Scrapping / Stripping:** The method of stripping should be normally by the scrappers/ small excavators only. The routing of scrappers/excavators during this operation must be planned to minimise the travel of machines to avoid compaction and damage of soil structure. Further careful control of operation is necessary to ensure planned stripping depths of the topsoil and sub-soil. These soils should be stripped and stored separately. Intermingling of these soils during stripping must be avoided.

It is essential that topsoil stripping should be carried out when it is dry as far as possible to reduce the risk of compaction and damage to the soil structure by smearing and remoulding. Prolonged rainfall is unsuitable. The best part of the year is when evapo-transportation exceeds precipitation i.e during the months of March-September.

Initial topsoil may be spread over the area to be mined. When the scope for progressive reclamation is available, the re-spread topsoil along with the in-situ one may be stripped carefully and utilised. This method would also preserve the topsoil and reduce the demand on land intake.

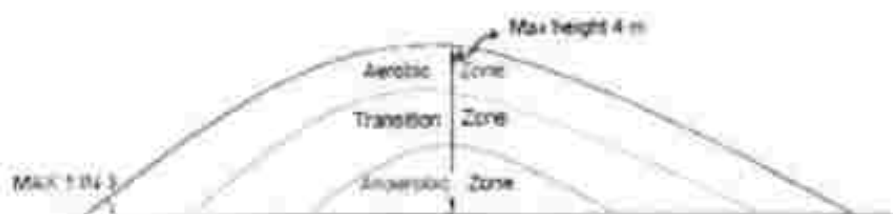
#### Storage of Top Soil:

Topsoil undergoes many changes during preservation. The following changes in topsoil due to storage may occur.

- Stockpiling has profound effects on the physicochemical and biological properties.
- Biological activity deteriorates after 3 to 6 months of storage.



- c) Stockpiling reduces organic content and affects the organic compound available in soil aggrivation.
- d) Aggregate stability is reduced to some extent due to storage.
- e) Following three zones are developed in the topsoil mound during storage:
  - Aerobic zones: Soil is active in this zone,
  - Transition zone: Fluctuates between predominantly aerobic and anaerobic status
  - Inactive Zone: This zone is inactive and low in biological activity as well as organic content.



SECTION OF A TOPSOIL STOCKPILE SHOWING DIMENSION AND VARIOUS ZONES INSIDE

#### Geometry of Topsoil Heap:

The heap should be constructed to facilitate the following:

- a. To provide the maximum surface area for maintaining greater level of Biological activity.
- b. To have slopes capable of sustaining vegetation to avoid erosion and gully formation.

Space constraints imposed by the site factors and soil texture would generally dictate the overall size and shape of the heap. As a rule of the thumb, the following stack geometry may be maintained as far as possible to preserve the topsoil and increase the shelf life.

#### a) Height:

- i. 4.0m (Max) for sand soil
- ii. 2.0 to 3.0 for loamy soil



- iii. 1.0 for heavy clayey soil
- iv. 0.5 to 1.0 for intermediate soil texture.

As the soil of the site is loamy the ideal height will be 3.00 m and all measures will be taken accordingly.

**b) Slope:**

Wide slope of 1 in 3 (i.e. 18.50 degree to the horizontal)

If there is constraint in the availability of area, one or both of the following strategies can be adopted:

**Alternate-I**

An acoustic barrier of topsoil may be constructed in the safety zone near the working face. When the working face advances, the embankment away from it may be reclaimed and re-spread over the subsoil of the technically reclaimed area. This would abate the noise pollution besides preservation of topsoil and reduction of the demand on the land requirement.

**Alternate-II**

Initial topsoil may be spread over the area to be mined. When the scope for Progressive reclamation is available, the re-spread topsoil along with the in-situ one may be stripped carefully and utilised. This method would also preserve the topsoil and reduce the demand on land intake.

**3.2.1 Precautionary Measures:**

- a) It is advisable to avoid the topsoil storage, specifically the long term one. However if storage is unavoidable upon completion of the surface of the heap, the following steps are to be followed to keep the soil in good health and to increase its shelf life.
- b) Surface ripping with suitable sub-soiling machine for the purpose of aeration and relieving surface compaction.
- c) Immediate cultivation of suitable low maintenance species like dwarf grasses to prevent erosion and gully formation.
- d) Maintenance of surface vegetation actively by seeding, mowing, and weed control operation

**3.2.2 Topsoil Carpeting:**

The following golden rules need to be observed:

- i. Overburden, sub-soil and topsoil should be re-spread to correct sequence putting the topsoil on the top of the back filled area.

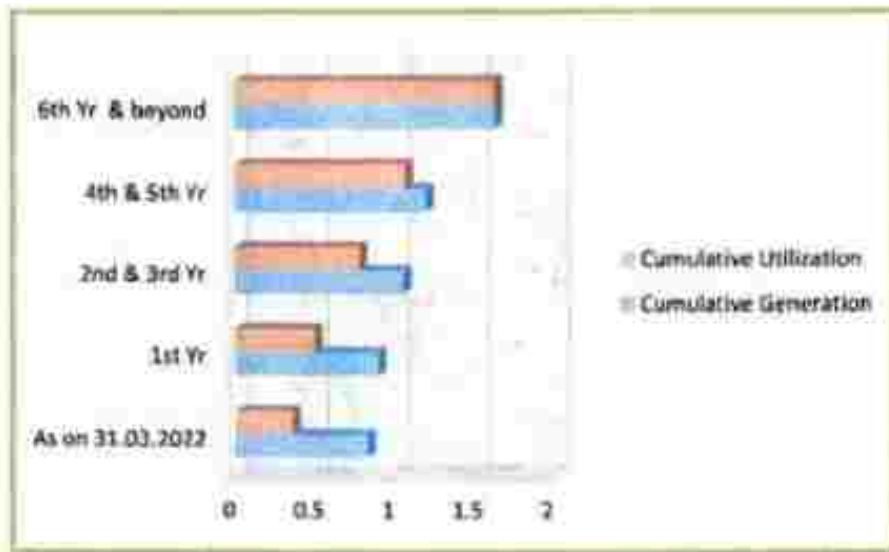


- ii. Top soil should be re-spread over the restoration area at an even depth so as to achieve the final level and suitable configuration for drainage.
- iii. As far as possible progressive top soil reclamation technique should be practised. The topsoil from the area lying just ahead of the advancing opencast mine edge should be scrapped off by scrapper and immediately placed over the technically reclaimed area.
- iv. Compaction of topsoil after re-spreading over reclaimed area should be avoided by properly planning the movement of Earth Moving Machinery and carrying out the operation in dry period only.
- v. If topsoil is to be reclaimed from the heap for spread in the backfilled area and OB dump area, the reclamation should be planned in such a way that materials from aerobic, transition and anaerobic zones are taken simultaneously. The above zones should not be taken out separately as it is essential to use the active surface layer as 'inoculum' during soil re-spreading to recover the inactive portion of the mound as quickly as possible.
- vi. Re-vegetated topsoil dumps with legumes (*Stylo santhus*) and grasses, which not only protect the stockpiles from wind and water erosion, but also maintain active soil microbe's population and help restoring the nutrient cycling.
- vii. Mulching: If possible, after the application of topsoil, a layer of mulch (2- 3" or 5- 8 cm thick) may apply to cover topsoil and provides organic matter initially. The mulch layer will prevent soil to dry out and crusted, reduce evaporation, ameliorate extreme temperature, prevent erosion and creates congenial microhabitat for soil biological community.

#### 4. Top Soil Generation & Utilization Schedule:

Year	Generation of Top soil in Mcum	Top Soil Generated in Mcum *	Utilization of Top soil (By Spreading Over) in Mcum			
			Back filling area *	OB Dump *	Utilized / to be utilized *	Balance *cumulative)
As on 31.03.2022		0.83	0.09	0.27	0.36	0.47
1 <sup>st</sup> Yr	0.07	0.90	0.18	0.32	0.50	0.40
2 <sup>nd</sup> & 3 <sup>rd</sup> Yr	0.15	1.05	0.36	0.42	0.78	0.27
4 <sup>th</sup> & 5 <sup>th</sup> Yr	0.14	1.19	0.54	0.52	1.06	0.13
6 <sup>th</sup> Yr & beyond	0.43	1.62	1.10	0.52	1.62	0
<b>Total</b>	<b>0.79</b>	<b>1.62</b>	<b>1.10</b>	<b>0.52</b>	<b>1.62</b>	<b>0</b>

\*Cumulative Figures



#### 4. Financial Estimation:

For Estimation of Top Soil management the following Rate is taken in to calculation:

1. Scrapping / Striping of Top Soil @Rs 227.67 as per Schedule of Rate @Rs462/- wage per day.
2. Spreading over Back Filled Area  $\frac{1}{2}$  Man days per cum i.e. Rs231/- per Cum
3. Spreading over OB Dump surface 1 Man days per Cum i.e. Rs462/- per Cum
4. Misc. Expenses for handling of Top Soil / Grassing storage etc Rs200/- per Cum.

Basing on the above rate the total financial estimation is projected below.

Sl No	Activities	Rate	1 <sup>st</sup> Yr	2 <sup>nd</sup> & 3 <sup>rd</sup> Yr	4 <sup>th</sup> & 5 <sup>th</sup> Yr	6 <sup>th</sup> Yr & beyond	Total
1	Scrapping / Stripping		70000	150000	140000	430000	790000
	Financial in Lakh Rs	@Rs227.67	159.369	341.505	318.738	978.961	1798.593
2	Spreading on Back Filled Area		90000	180000	180000	560000	1010000
	Financial in lakh Rs	@231.00	207.90	415.80	415.80	1293.60	2333.10
3	Spreading on OB Dump Surface		50000	100000	100000	0	250000
	Financial in lakh Rs	@462/-	231.00	462.00	462.00	0.00	1155.00
4	Misc. Expenses for handling /Grassing / storage		70000	150000	140000	430000	790000
	Financial in lakh Rs	@Rs200/-	140.00	300.00	280.00	860.00	1580.00
	<b>S.Total</b>		<b>738.269</b>	<b>1519.305</b>	<b>1476.538</b>	<b>3132.581</b>	<b>6866.693</b>
	<b>Add 20% for Cost escalation</b>		<b>147.654</b>	<b>303.861</b>	<b>295.308</b>	<b>626.516</b>	<b>1373.339</b>
	<b>Total</b>		<b>885.923</b>	<b>1823.166</b>	<b>1771.846</b>	<b>3759.097</b>	<b>8240.032</b>

(Rupees Eighty Two Crore Forty Lakh Three Thousand & Two Hundred Only)

Technically Approved

~~Regional Chief Conservator of Forests  
Bijalkota Circle~~

## 5. General / Summary of prescriptions:

Effective topsoil management in mining is essential for successful rehabilitation and involves minimizing damage during stripping, storage, and replacement. The best outcome is achieved through direct placement, where stripped topsoil is immediately used on a ready rehabilitation area. When storage is unavoidable, the following dos and don'ts apply:

### 5.1 Do's for Topsoil Management

- **Do conduct a soil survey:** Before any disturbance, conduct an in-depth soil survey to identify suitable topsoil material, its characteristics, and depth.
- **Do strip the soil in suitable condition:** Strip topsoil when it is dry or only slightly moist to minimize compaction and preserve its structure and biological activity.
- **Do strip to appropriate depths:** Remove the biologically active "A" horizon (typically the top 10-30 cm) separately, as it is rich in organic matter and nutrients essential for plant growth.
- **Do separate soil layers:** Store topsoil, subsoil, and rock materials in separate, clearly marked stockpiles to avoid cross-contamination and ensure proper reconstruction during rehabilitation.
- **Do minimize storage time:** Plan operations so that topsoil is stored for the shortest possible time, as quality decreases the longer it is stockpiled.
- **Do use correct stockpile dimensions:** Store topsoil in low, wide, and flat-topped stockpiles (less than 3m in height for most soils) to maximize the aerobic zone and minimize deep compaction and anaerobic conditions.
- **Do stabilize stockpiles:** Immediately seed stockpiles with a temporary cover crop (e.g., a grass-legume mixture) to prevent wind and water erosion and maintain the soil's microbial population and seed bank.
- **Do protect from traffic and erosion:** Locate stockpiles in designated areas away from heavy vehicle routes and natural drainage lines, and use erosion control measures such as sediment fences.



- **Do loosen the receiving surface:** Before placing topsoil, loosen or deep rip the underlying subsoil surface to ensure a good bond between layers and promote water infiltration and root growth.
- **Do monitor and amend:** Conduct soil analysis on stored topsoil to monitor its viability and determine if amendments (like organic manure or compost) are needed before final use.

#### 5.2 Don'ts for Topsoil Management:

- **Doesn't strip or place wet soil:** Avoid stripping or handling soil in wet or muddy conditions, as this leads to severe compaction?
- **Don't mix topsoil and subsoil:** Never mix the rich, upper topsoil layer with the underlying subsoil or overburden material.
- **Don't compact stockpiles:** Prohibit vehicles and heavy machinery from driving over or compacting the topsoil stockpiles after they are formed.
- **Don't store near drainage lines:** Do not locate topsoil stockpiles in creeks, natural drainage lines, or on steep slopes where erosion potential is high.
- **Don't leave surfaces smooth:** Avoid leaving the final graded slopes or the surface of replaced topsoil smooth; roughen the surface to help anchor the soil, reduce erosion, and aid seed germination.
- **Don't apply to overly steep slopes:** Avoid applying topsoil to slopes steeper than 2:1 (vertical to horizontal) to prevent slippage.
- **Don't ignore the seed bank:** Recognize that the seed bank and microorganisms in the topsoil are valuable for rehabilitation; manage the soil to preserve these biological elements.

#### 6. Executing agency:

The Top soil Management Plan will be implemented in course of mining by the MCL authority under technical supervision of Mines Manager / Project Officer of Kulda Mines.

## 5. General / Summary of prescriptions:

Effective topsoil management in mining is essential for successful rehabilitation and involves minimizing damage during stripping, storage, and replacement. The best outcome is achieved through direct placement, where stripped topsoil is immediately used on a ready rehabilitation area. When storage is unavoidable, the following dos and don'ts apply.

### 5.1 Do's for Topsoil Management

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- **Do strip to appropriate depths:** Remove the biologically active "A" horizon (typically the top 10-30 cm) separately, as it is rich in organic matter and nutrients essential for plant growth.
- **Do separate soil layers:** Store topsoil, subsoil, and rock materials in separate, clearly marked stockpiles to avoid cross-contamination and ensure proper reconstruction during rehabilitation.
- **Do minimize storage time:** Plan operations so that topsoil is stored for the shortest possible time, as quality decreases the longer it is stockpiled.
- **Do use correct stockpile dimensions:** Store topsoil in low, wide, and flat-topped stockpiles (less than 3m in height for most soils) to maximize the aerobic zone and minimize deep compaction and anaerobic conditions.
- **Do stabilize stockpiles:** Immediately seed stockpiles with a temporary cover crop (e.g., a grass-legume mixture) to prevent wind and water erosion and maintain the soil's microbial population and seed bank.
- **Do protect from traffic and erosion:** Locate stockpiles in designated areas away from heavy vehicle routes and natural drainage lines, and use erosion control measures such as sediment fences.



**Analysis of rate for Earth work as per PWD rate Odisha wage rate @  
Rs462/- Per day**

SI No	Description of Work	MD Required	Amount @Rs462/-
1	Earth work in slushy soil (in water upto 0.6m depth requiring the aid of pans and vessels) within 50m. Initial lead and 1.5m initial lift as per the direction and specification of the Department.	Man Mulia 21 No	9702/-
		Woman Mulia 23 no	10626/-
		S. Total	20328.00
2	Overhead Charges 10%		2032.80
3	Sundries 2%		406.56
	Total		22767.36
	Rate for 100 cum		22767.36
	Rate per cum		Rs227.67



## 7. Inspection and Monitoring.

The manner of execution & periodical monitoring will be made by the MCL authority. The Execution and achievements may be reviewed by the Divisional Forest Officer, Sundargarh from time to time as possible.


### 7.1 Monitoring and Maintenance:

- **Regular Inspections:** Periodically check stockpiles for signs of erosion, weed infestation, or drainage issues.
- **Quality Testing:** Before redistributing stored topsoil, test it for agronomic viability to determine if soil amendments (like compost or fertilizer) are needed to restore lost nutrients.
- **Decompaction Before Reuse:** if the receiving surface or the topsoil itself is compacted, use ripping or scarifying (to a depth of at least 10–15 cm) to ensure proper bonding between soil layers

## 8. Commitment "Not to Damage Top Soil"

*It is to put forth our Commitment "Not to cause any Damage to Top Soil" in course of mining. All precautionary measures as outlined in this Plan will be strictly followed.*

Encl: Analysis of rate for Earth work as per PWD rate Odisha wage rate @ Rs462/- Per day

  
07/01/2026  
Project Officer,  
Kuida OCP  
Basundhara Area, MCL  
Sundargarh

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION


## UNDERTAKING

(Condition No. 13)

### *Desilting of Village Tanks & Water Bodies*

It is hereby undertaken that the User Agency shall regularly undertake desilting of village tanks and other water bodies located within a 5 km radius of the mining lease boundary, so as to mitigate the impact of siltation due to mining operations.

The desilting works shall be carried out as per the approved plan, in consultation with and under the supervision of the State Forest Department, and in accordance with Condition No. 13 of the Stage-I Forest Clearance.

  
04/01/2026  
(Signature of User Agency)  
Project Officer  
Official Seal  
Kulda Opencast Proj  
परियोजना अधिकारी  
कुल्डा परियोजना

Date... 04/01/2026

Place... Kulda OCP

  
DIVISIONAL FOREST OFFICER  
SUNDARGARH FOREST DIVISION

**PROFORMA FOR VERIFICATION OF DEPOSITS IN COMPENSATORY AFFORESTATION FUND**

1.	Name of Office	Bhubaneswar
2.	State/District/Forest Division to which the proposal relates	Odisha/ Sundergarh/ Sundergarh Forest Division
3.	Name of User Agency, nature of proposal	Project Officer Kulis OCP, Besundhara Area, MCL.
4.	Nature and category of proposal	Mining
5.	Proposal number	FPOR/MIN/50293/2020
6.	Extent of forest area involved	134.69 Ha
7.	Whether original or extension	Na
8.	If extension of lease, please clarify if proposal involves additional forest area and if so, specify	Na
9.	Date of 1st Stage clearance	Dr. 10.07.2025
	<b>Extent of CAMPA charges, head wise viz.:</b>	
	(A) Compensatory Afforestation	Rs. 10,99,09,200/-
	(B) Additional Compensatory Afforestation	Na
	(C) Penal Compensatory Afforestation	Na
	(D) Catchment Area Treatment	Na
	Wildlife Management Plan	Na
(e)	i) Site Specific Wildlife Conservation Plan	Rs. 11,15,12,000/-
	ii) Regional Wildlife Management Plan	Na
	iii) Cost of Dwarf Plantation Scheme	Na
	(f) Additional charges for diversion of area falling under notified/protected areas	Na
	(g) Net Present Value	Rs. 16,54,78,787/-
10.	Any other charges/fees (Please specify)	
	i) Penal NPV	Na
	ii) Safety Zone	Na
	iii) 1.5 times Safety Zone	Na
	iv) Scheme for Gap plantation and soil moisture conservation activities within 100 mtr. from M.L. boundary	Rs. 27,62,412/-
	v) Interest on belated payment of NPV	Na
	<b>Total</b>	<b>Rs. 38,96,62,399/-</b>

Whether payment made through challan or otherwise. In case of online payment, details of challan.		Challan and online payment.					
11.	Details of deposits						
12.	Type of deposit (NPV/CA/ TWMP/ Others (specify))	Whether by RTGS/DD/ NEFT (Specify)	UTR/ DD No.	Amount deposited (Rs.)	Date of deposit	Name of Bank from which amount transferred to account of CAF	Bank Account of CAF managed by CAMPA in which fund deposited
i)	NPV	NEFT	UTR No. SBINR 52025082696596623	165478787	26.08.2025	State Specific CAMPA Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293737 IFSC Code- UBIN09996335
ii)	Interest on belated payment of NPV	Nil	Nil	Nil	Nil	Nil	Nil
iii)	Compensatory Afforestation Scheme	NEFT	UTR No. SBINR 52025082696596623	109909200	26.08.2025	State Specific CAMPA Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150825850293737 IFSC Code- UBIN09996335
iv)	Differential amount of Compensatory Afforestation Scheme	Nil	Nil	Nil	Nil	Nil	Nil
v)	Site Specific Wildlife Conservation Plan	NEFT	UTR No. SBINR 52025071892582223	111512000	18.07.2025	State Specific CAMPA Union Bank of India FCS Centre, 21-1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027.	AC No. 150528850293440 IFSC Code- UBIN09996335
vi)	Regional Wildlife Management Plan	Nil	Nil	Nil	Nil	Nil	Nil
vii)	1.5 times Safety Zone etc.	Nil	Nil	Nil	Nil	Nil	Nil

Sl. No.	Species	Plantation	NI	NI	NI	NI	NI
(a)	Deer species	Plantation					Nil
(b)	Schedule-III	Gap Plantation	NEFT	UFR No. 58/DNR 52025111403860265	2768412	18/11/2026	State Specific CAMPA Union Bank of India FCS Centre, 21-1, III Floor, Jitima Towers, Mission Road, Bangalore-560027. AC No. 150825850993283 IFSC Code- UBIN0996333

Date:

Place: Sundargarh


Project Officer  
Mukda Opencast Project  
सिंचन प्रकल्प  
सुंदरगढ़

Divisional Forest Officer  
Sundargarh Forest Division  
Sundargarh Division

## Payment to CAMPA account for Kulda Expansion OCP

Sl No.	MoEF Condition No.	Name of the Activities	Amount in Rupees	Account No and Name of the Bank	Draft No or UTR No. of RTGS	Date of deposit.
1	2(a), 2(b)	Compensatory Afforestation	₹10,99,09,200.00	State specific CAMPA A/c.No. 150825850293737 of Union Bank Of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027	UTR No. SBINR52025082696596 623 Dt. 26.08.2025 from SBI, Balinga Branch.	26.08.25
2	3(a)	Net Present Value (NPV)	₹16,54,78,787.00	State specific CAMPA A/c.No. 150825850293737 of Union Bank Of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027	UTR No. SBINR52025082696596 623 Dt. 26.08.2025 from SBI, Balinga Branch.	26.08.25
3	6, 17	Site Specific Wild Life Plan Fund	₹11,15,12,000.00	State specific CAMPA A/c.No. 150825850293440 of Union Bank Of India FCS Centre, 21/1, III Floor, Jelitta Towers, Mission Road, Bengaluru-560027	UTR No. SBINR52025071892582 223 Dt.18.07.25 from SBI, Balinga Branch.	18.07.25

4	12.	Gap Plantation in nearby degraded forests	₹27,62,412.00	State specific CAMPA A/c.No. 15082550293293 of Union Bank of India FCG Bangalore	UTR SBINR52025111405360 265 Dt. 14.11.25 from SBI, Balinga Branch.	No. 14.11.25
		Total Rs. :	₹38,96,62,399.00	Rupees Thirty Eight Crores, Ninety Six lakhs, Sixty Two thousand, Three hundred and ninety nine only.		
7						
8						

  
 02/01/2026  
 Project Officer  
 Kulda OCP  
 Basundhara Area  
 Project Officer  
 Kulda Opencast Project  
 परियोजना अधिकारी  
 कुल्दा परियोजना





OFFICE OF THE DIVISIONAL FOREST OFFICER,  
SUNDARGARH FOREST DIVISION

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



No. 91 /4F (Misc.) /Dated. 07/01/2026

To,

The Project Officer,  
Kulda OCP Basundhara Area, (MCL.)  
Sundargarh, Odisha-770076.

Sub: - Proposal for diversion of 134.69 ha of forest land for Expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh district under Sundargarh Forest Division.

Ref: - Memo No. 05 dt. 01.01.2026 of Regional Chief Conservator of Forests, Rourkela Circle Rourkela.

Sir,

With reference to the letter cited above, it is to intimate that, some discrepancies/ shortcomings have been raised by the Regional Chief Conservator of Forests, Rourkela Circle Rourkela, during scrutiny of the Stage-I compliance report in respect of the diversion proposal. The copy of Memo No. 05 dt. 01.01.2026 is enclosed herewith for your reference.

Therefore, you are requested to submit necessary compliance on **point No. 01 to 07** this office at an early date for onward transmission to higher quarters.

Encl: - As above

Yours faithfully,

  
Divisional Forest Officer  
Sundargarh Forest Division

Memo No. 92 /4F (Misc.) /Dated. 07/01/2026

Copy forwarded to the Addl. Principal Chief Conservator of Forests, Forest Diversion & Nodal Officer, FC-Act, O/o the Principal Chief Conservator of Forests & HoFF, Odisha, Bhubaneswar for favour of kind information and necessary action with reference to Memo No. 04 dt. 01.01.2026 of Regional Chief Conservator of Forests, Rourkela Circle, Rourkela.

  
Divisional Forest Officer  
Sundargarh Forest Division

Memo No. 93 /4F (Misc.) /Dated. 07/01/2026

Copy forwarded to the Regional Chief Conservator of Forests, Rourkela Circle, Rourkela for kind information and necessary action with reference to his Memo No. 03 dt. 01.01.2026.

  
Divisional Forest Officer  
Sundargarh Forest Division



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

(Phone No-06622-272243, E-Mail- [df@sundargarh@odisha.gov.in](mailto:df@sundargarh@odisha.gov.in))



Memo No. 8163 /4F (Misc) /Dated. 20 /12/2025

To

The Regional Chief Conservator, of Forests  
Rourkela Circle Rourkela

Sub:- Proposal for seeking prior approval of the Central Government under Section-2 of the van (Sarvakshan Evam Samvardhan) Adhiniyam, 1980 for non-forestry use of 134.69 ha of forest land for Expansion of Kulda Open Cast Coal Mining Project of Basundhara Area of Mahanadi Coalfields Limited in Sundargarh District under Sundargarh Forest Division (Proposal No. FP/OR/MIN/50293/2020).

Ref:- 1) Stage-I approval orders of MoEF & CC, Govt of India, New Delhi dated. 10.07.2025.  
2) Letter No.MCL/BA/PO/KOCP/2025-26/752, dated.26.06.2025 of Project Officer, Kulda OCP, Basundhara Area of MCL.

In inviting a reference to the letter cited above, the User Agency has submitted the Stage-I compliance report along with all related documents relating to the above project, the point wise Stage-I compliance report is furnished below: -

**1. Legal status of the forest land shall remain unchanged.**

The User Agency has submitted that, in compliance to the stipulated condition, the legal status of 134.69 ha of forest land proposed for diversion shall remain unchanged and an undertaking to this effect, submitted by the User Agency is enclosed as **Annexure-I**.

**2(a). Compensatory Afforestation (CA) – The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation as per the approved CA Scheme at the current wage rate in consultation with State Forest Department in the account of CAMPA of the concerned State through online portal;**

In compliance to the above, CA scheme for 280.90 ha (Sikajore-A RF-74.50Ha, Sikajore PRF-40.00Ha, Tangarpali DPF- 14.00Ha, Pandripani RF-64.30Ha, Sidharmunda RF-50.40Ha & Punjipahad RF-37.70Ha.) of degraded forest land has been prepared by the State Forest Department ensuring 500 seedlings/ha and the User Agency has deposited an amount of **Rs.10,99,09,200.00** towards CA, as per the approved CA Scheme at the current wage rate in the state specific CAMPA account, UTR No. SBINR52025082696596623, Dated. 26.08.2025. The payment receipt is enclosed herewith as **Annexure-II**.

**2(b). The cost of survey, demarcation and erection of permanent pillars, if required on the identified CA land, shall be deposited in advance with the Forest Department by the user agency. The CA will be maintained for 10 years. The scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years;**

In compliance to the stipulated condition, the User Agency has completed the work of survey, demarcation and erection of permanent pillars on the identified compensatory afforestation land. The site-specific CA scheme also provides for afforestation of indigenous species and includes maintenance for 10 years, with provisions for anticipated cost escalations for works scheduled in subsequent years. Payment receipt and approved CA scheme are enclosed as **Annexure-III**.

Contd...P/2

**2(c).** The compensatory afforestation over degraded forest land i.e. 280.90 ha, shall be raised by the State Forest Department at the project cost and the afforestation works shall start within two years from the date of grant of final approval.

In compliance to the stipulated condition, it is agreed that the compensatory afforestation over 280.90 ha of degraded forest land will be raised by the State Forest Department at the Project Cost. The afforestation works will be initiated within two years from the date of grant of final approval. An undertaking to this effect as submitted by the User Agency is enclosed as **Annexure-IV**.

**2(d).** The State shall ensure that the CA scheme is prepared to accommodate at least 1000 seedlings/ha over DFL identified for CA. In case 1000 saplings cannot be accommodated per hectare in the DFL identified for CA, the balance seedlings will be planted in any RF/PF as per prescription of the working plan. The State Government will intimate the name/details of the RFs/PFs areas in which the balanced seedlings are to be planted. The user agency shall deposit the cost of plantation of the same.

The Para.2.8 (ii) of Hand Book of guidelines communicated by MoEF & CC, GoI dt.28.03.2019 envisages that "CA over Degraded Forest Land (DFL): CA scheme shall be prepared for minimum of 1000 saplings per hectare of identified CA Land with ten-year maintenance. The plantation in the identified DFL shall be done as per the site requirement. The balance seedlings, if any shall be done as per the site requirement. The balance seedlings, if any, that could not be planted in the identified DFL, shall be planted in other DFL as per working plan prescriptions. The State Govt. will intimate names of the RFs/PFs in which the balance seedlings will be planted".

It is pertinent to mention here that the above Para has been deleted as per the decision of the FAC meeting held on 23.04.2019 vide Agenda No.11. In this context, a copy of the minutes of the meeting of FAC held on 23.04.2019 is enclosed herewith for kind ready reference.

Further, in the extant consolidated guidelines circulated by the MoEF & CC, GoI on 29.12.2023, no such provision has been prescribed. The condition imposed in the present proposal also contradicts the decision of guidelines communicated on 08.11.2017 related to the number of seedlings to be planted against the forest land proposed for diversion.

In view of the above, the requirement of accommodating at least 1000 saplings/ ha. over the DFL identified for CA in respect of the instant diversion proposal may not be required. Therefore, the scheme prepared over an area of 280.90 ha. of degraded forest land identified under the jurisdiction of Sundargarh Forest Division for Compensatory Afforestation as per DSS analysis report, accommodating 1,40,450 nos. of seedlings against the required 1,34,690 nos. of seedlings may be kindly be considered as it compensates the loss of trees by trees of at least 1000 seedlings/ ha. in lieu of forest land over 134.69 ha. proposed for diversion.

**3. NPV:(a).** The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the orders of the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 and the guidelines issued by this Ministry vide its letter No. 5-3/2007-FC (pt.) dated 29.12.2023 through online portal of CAMPA account of the State Concerned; 3(a). Net Present Value (NPV) as per Hon'ble Supreme Court orders.

In compliance to above, the User Agency has deposited the cost of Net Present Value (NPV) Rs.16,54,78,787.00 via Parivesh portal through online in CAMPA account of the State Concerned vide UTR No. SBINR52025082696596623, Dated. 26.08.2025. The copy of payment receipt is attached herewith as **Annexure-V**.

3(b). At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India; Undertaking to pay additional NPV, if revised by Hon'ble Supreme Court.

In compliance to above, an undertaking to this effect has been submitted by the User Agency for payment of additional NPV, if required, and is attached herewith as **Annexure-VI**.

4) The State Govt. shall submit the compliance report in respect of Stage-I approval accorded to M/s MCL in Bashundhara washery by MoEF & CC vide letter no 8-176/1997 FC(Vol) dated 11.03.2019;

In compliance to above, the complete compliance report in respect of Stage-I approval accorded to M/s MCL in Bashundhara washery, is attached herewith as **Annexure-VII**.

5) The user agency shall prepare a schedule for surrender of the mined out and reclaimed Forest land in accordance with existing mine plan and submit the same along with an undertaking to surrender the mined out and reclaimed forest land as per such schedule to the ministry, before grant of final approval under the Adhiniyam for diversion of said Forest land.

In compliance to the stipulated condition, the User Agency has submitted a schedule for surrender of mined out and reclaimed forest land in accordance with existing Mining plan cum Mine closure Plan for Kulda OCP (Expansion) project, Basundhara Area, technically approved by the RCCF, Rourkela Circle, Rourkela. The copy of the approved scheme is enclosed as **Annexure-VIII**.

6) A wildlife plan should be prepared for conservation and mitigation of impact on wildlife in consultation with CWLW and the same should be approved and monies deposited before final approval.

In compliance to this effect, a Site-Specific Wild Life Conservation Plan has been prepared in consultation with the PCCF (Wildlife) & CWLW, Odisha, Bhubaneswar and accordingly an amount of Rs.11,15,12,000.00 has been deposited into the State specific CAMPA account, vide UTR No. SBINR52025071892582223, Dated. 18.07.2025 by the User Agency. The copy of approved scheme and the payment receipt is attached herewith as **Annexure-IX**.

7) Compensatory levies to be realized from the User Agency under the project shall be transferred/ deposited, through e-challan, in to the account of CAMPA pertaining to the State concerned through e-portal (<https://parivesh.aic.in/>);

In compliance to the stipulated condition, all payments (CA, NPV, WLMP etc) has been made by the User Agency via Parivesh portal into the CAMPA account. The payment proof is enclosed herewith as **Annexure-X**.

8) The KML files of diverted area, the CA areas, the proposed SMC treatment area and the WLMP area shall be uploaded on the e-Green watch portal along with GPS Ids and all other requisite details prior to final approval;

In compliance to this effect, the respective KML files of diverted area & CA areas have been uploaded on e-Green Watch portal. The screenshot copy of which is enclosed as **Annexure -XI**.

9) Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department;

**9-a) Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three years with effect from the issue of Stage-II clearance in accordance with the approved Plan in consultation with the State Forest Department;**

In compliance to the stipulated condition, a scheme amounting to Rs. 63,01,556.00 has been prepared and technically approved by the RCCF, Rourkela Circle, Rourkela, for implementation of mitigative measures to control soil erosion and prevent choking of streams, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XII**.

**9-b). Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved scheme;**

In compliance to the stipulated condition, a comprehensive scheme amounting to Rs.8,58,44,558.00 has been prepared and technically approved by the RCCF, Rourkela Circle Rourkela, for planting of adequate drought-hardy species and sowing of suitable seeds within the mining lease area to arrest soil erosion, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XIII**.

**9-c). Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;**

In compliance to the stipulated condition, a scheme amounting to Rs. 5,92,52,400.00 has been prepared and technically approved by the RCCF, Rourkela Circle Rourkela, for construction of check dams, retention walls and toe walls along the contours to arrest sliding and movement of excavated material, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XIV**.

**9-d). Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°;**

In compliance to the stipulated condition, a scheme amounting to Rs. 37,68,720.00 has been prepared and technically approved by the RCCF, Rourkela Circle Rourkela, for stabilization of overburden dumps through appropriate grading and benching, ensuring that the angle of repose at all locations remains below 28°, in accordance with the approved Mining plan cum Mine closure Plan and in consultation with the State Forest Department. The approved scheme is attached herewith as **Annexure-XV**.

**10). Safety Zone Management: Following activities, at project cost, shall be undertaken by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines:**

**a). User agency shall ensure demarcation of safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under the supervision of the State Forest Department;**

The User Agency has intimated that, demarcation of safety zone (7.5-meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers will be undertaken. The copy of undertaking is enclosed herewith in **Annexure-XVI**.

**b). Boundary of the safety zone of the mining lease, adjacent to habitation/roads, should be properly fenced by the user agency;**

The User Agency has intimated that, boundary of the safety zone of the mining lease, adjacent to habitation / roads, shall be properly fenced. The copy of undertaking is enclosed herewith in **Annexure-XVI**.

**c). Safety zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under the supervision of the State Forest Department;**

In compliance to the stipulated condition, a scheme amounting to **Rs. 1,06,95,072.00** has been prepared and technically approved by the RCCF, Rourkela Circle Rourkela, for Safety zone to be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area. The approved scheme is attached herewith as **Annexure-XVII**.

**d). The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms;**

The User Agency has intimated that; safety zone is maintained as per the prescribed norms. The copy of undertaking is enclosed herewith in **Annexure-XVI**.

**11). No damage shall be caused to the top-soil and the user agency will follow the top soil management plan;**

In compliance to the stipulated condition, the User Agency has submitted that the Topsoil generated during mining operations will be separately stored and preserved in designated areas to prevent degradation and will be effectively utilized for reclamation and biological restoration as per the Topsoil Management Plan incorporated in the approved Mining Plan cum Mine Closure Plan. An undertaking to this effect submitted by the User Agency is enclosed as **Annexure-XVIII**.

**12). User agency either himself or through the State Forest Department shall undertake gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located in the area within 100 meters from outer perimeter of the mining lease. The plan for plantation and SMC activities will be prepared and submitted to MoEF &CC before final approval;**

In compliance to the stipulated condition, a detailed scheme for the plantation and SMC activities has been prepared and technically approved by RCCF, Rourkela. The estimated cost of the scheme is **Rs. 27,62,412.00**, the work as per the scheme shall be carried out through the State Forest Department and hence the said amount has been deposited to the state specific CAMPA account. Vide UTR No. SBINRS2025111405860265, Dated. 14.11.2025. receipt is attached herewith as **Annexure-XIX** and the approved scheme is attached herewith in **Annexure-XX**.

**13). The User Agency shall prepare a list of existing village tanks and other water bodies with GPS co-ordinates located within five km from the mine lease boundary. This list is to be duly verified by the concerned Divisional Forest Officer. The User Agency shall regularly undertake desilting of these village tanks and other water bodies so as to mitigate the impact of siltation of such tanks/water bodies. A detailed approved plan for desilting of identified ponds and water bodies to be prepared in consultation with forest department and shall be submitted to MoEF & CC before Stage-II approval;**

In compliance to the stipulated condition, the User Agency has prepared a list of existing village tanks and other water bodies located within five kilometers of the mining lease boundary, including their GPS coordinates. This list has been duly verified. A detailed scheme for desilting the identified tanks and water bodies, has been prepared and technically approved by RCCF Rourkela, which is attached herewith as **Annexure-XXI**. The total cost of the scheme is **Rs.2,03,23,195.00** and the work will be carried out by the user agency at the project cost.

**14). The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;**

In compliance with the condition, it is submitted by the User Agency that, the cost towards felling of trees shall be deposited to the State Forest Department as per the demand raised. An undertaking to this effect, along with a commitment for phased tree felling and maximum possible translocation, has been submitted by the User Agency, which has been attached at **Annexure-XXII**.

**15). Trees should be felled in phased manner as per the requirement in the approved Mining Plan with prior permission of concerned DFO;**

In compliance with the condition, an undertaking has been submitted by the User Agency to ensure that the tree felling will be carried out in a phased manner strictly as per the requirement of the approved Mining Plan and only after obtaining prior permission from the Divisional Forest Officer. The undertaking is attached herewith as **Annexure-XXII**.

**16). The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department.**

In compliance to the stipulated condition, the User Agency has undertaken to explore all possible measures for translocation of the maximum number of trees identified for felling. It is being ensured that tree felling will be carried out only when unavoidable and strictly under the supervision of the State Forest Department. The undertaking to this effect submitted by the User Agency is attached herewith as **Annexure-XXII**.

**17). A Site-Specific Wildlife Management Plan shall be prepared by the State Government in consultation with the PCCF (Wildlife) for the protection and conservation of wildlife of the area. A copy of approved Plan shall be submitted to the Ministry along with the compliance of Stage-I approval. Entire cost of implementation of the provisions of the Wildlife Management Plan shall be deposited into the account of CAMPA of the State;**

In compliance to the stipulated condition, a Site-Specific Wildlife Conservation Plan has been prepared in consultation with the PCCF (WL) & CWLW for the protection and conservation of wildlife in the project area. The Plan has been duly approved by the PCCF (Wildlife) & CWLW, Odisha Bhubaneswar. An amount of **Rs.11,15,12,000.00** has been deposited into the State specific CAMPA account, vide UTR No. SBINR52025071892582223, Dated. 18.07.2025 by the User Agency. The copy of approved Site-Specific Wild Life Management Plan is attached herewith as **Annexure-IX**. The details of payment receipt submitted by the User Agency is attached herewith as **Annexure-IX**.

**18). The State Government shall complete settlement of rights, in term of the Scheduled Tribes and Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, if any, on the forest land to be diverted and submit the documentary evidence, in accordance with the Rule 11 (7) of the Van (Sanrakshan Evam Samvardhan) Rules, 2023; The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area.**

In compliance to the stipulated condition, the settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, has been completed for the forest land proposed for diversion. The Forest Rights Act (FRA) certificate has been issued by the Collector, Sundargarh, in accordance with Rule 11(7) of the Van (Sanrakshan Evam Samvardhan) Rules, 2023 which is attached herewith as **Annexure-XXIII**.

**19). The concurrent reclamation plan as per the approved mining plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Forest (Conservation) Act, 1980, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the concern Addl. Principle Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed;**

In compliance to the said condition the User Agency has stated that, the concurrent reclamation activities shall be implemented from the very first year of mining operation as per the approved mining plan. The reclamation works include backfilling of excavated voids, grading, soil spreading, and biological reclamation through plantation over backfilled areas and stabilized external dumps. Progress of these activities shall be monitored regularly.

An annual report on implementation of concurrent reclamation plan shall be prepared and submitted every year to the Nodal Officer (FCA), Government of Odisha, and the Regional Office, MoEF & CC, Bhubaneswar, as required under this condition.

The activities are progressing as per the approved schedule and the mine maintains a balance between excavation and reclamation. Hence, the condition is being complied satisfactorily and will be maintained on a regular basis. An undertaking has been submitted by the User Agency as **Annexure XXIV**.

**20). The User Agency shall comply with the Hon'ble Supreme Court order on re-grassing, and re-grass the mining area and any other areas which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner;**

In compliance with the Hon'ble Supreme Court order regarding re-grassing of mined-out areas, the User Agency has submitted that, systematic re-grassing and biological reclamation of backfilled and other disturbed areas will be taken up to restore them for the growth of fodder, flora and fauna.

Reclamation and re-grassing will be carried out as part of the concurrent reclamation plan from the initial years of mining operations. The process includes:

- Grading and leveling of backfilled areas to attain the desired slope.
- Spreading of topsoil and application of organic manure to enhance fertility.
- Broadcasting of grass seeds (such as *Chrysopogon Zizanioides*, *Stylo Hamata*, *Dicanthium Annulatum*, *Cynodon Dactylon*, etc.) for soil stabilization and development of ground cover.
- Plantation of suitable native species on dumps and reclaimed areas to promote ecological balance and biodiversity.

Thus, the condition complied with and is being maintained on a continuing basis. An undertaking to this effect has been submitted by the User Agency which is attached herewith as **Annexure XXV**.

**21). Period of diversion of the said forest land under this approval shall be for a period co-terminus with the period of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended time to time and the Rules framed there-under;**

The User Agency has submitted that the diversion of forest land for the project is co-terminus with the period of the mining lease granted under the provisions of the Mines and Minerals (Development and Regulation) Act, 1957, and the rules framed thereunder, as amended from time to time.

Accordingly, the forest land diverted under this approval shall remain under the possession and use of the User Agency only for the validity period of the mining lease. It is hereby undertaken that upon expiry or termination of the lease period, the forest land shall be handed back to the Forest Department after completion of all reclamation, rehabilitation, and re-grassing measures as prescribed in the approved Mine Closure Plan and in accordance with the Forest (Conservation) Act, 1980. The undertaking to this effect as submitted by the User Agency is attached herewith as **Annexure XXVI**.

**22). The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;**

The User Agency has already submitted the proposal for obtaining Env. Clearance (EC) for the Kulda Opencast Project (Expansion to 21.0 MTPA) under the provisions of the Environment (Protection) Act, 1986 and the EIA Notification, 2006 vide Proposal No. IA/OR/CMIN/555625/2025.

The proposal is presently under consideration of the Ministry of Environment, Forest and Climate Change (MoEF &CC), Government of India. Necessary studies including the EIA/EMP report, public hearing, and Action plan for issues raised in Public Hearing have been completed and submitted as part of the EC appraisal process.

The User Agency undertakes that mining operations under the expansion proposal shall commence only after obtaining the requisite Environmental Clearance from MoEF &CC. An undertaking to this effect is attached herewith as **Annexure – XXVII**.

**23). No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;**

In compliance to the said condition, it is hereby undertaken by the User Agency that no labour camp shall be established on the forest land. The User Agency undertakes that all labourers and staff engaged in the project shall be accommodated outside the forest area in designated labour colonies or nearby villages with proper facilities.

The User Agency further undertakes to provide alternate fuel sources such as LPG or kerosene to all workers and staff deployed at the site to ensure that there is no dependence on nearby forest resources for fuel requirements. Strict supervision shall be maintained to ensure that no damage or pressure is exerted on the adjoining forest areas. An undertaking to this effect is being furnished herewith as **Annexure – XXVIII**.

**24). The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;**

The boundary of the diverted forest land, mining lease have already demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar with GPS co-ordinates. The photo copy of the pillars submitted by the User Agency is attached as **Annexure-XXIX**.

Further, the User Agency has undertaken that the demarcation of the safety zone (7.5 Meter strip along the inner boundary of the mining lease) is under progress & shall be completed shortly at the project cost by erecting four feet high reinforced cement concrete (RCC) pillars. Each pillar shall be inscribed with its unique serial number, inner-pillar distance, GPS/DGPS coordinates, strictly as per the guidelines of the Ministry and under the supervision of the State Forest Department. An undertaking to this effect is being furnished by the User Agency which is attached herewith as **Annexure – XXX**.

**25). The layout plan of the proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal except the change in land use allowed on the forest land vide Ministry's guideline dated 26.12.2024;**

The User Agency has undertaken that; the approved layout plan of the project shall not be altered or modified without obtaining prior approval from the Central Government. The User Agency further undertakes that, the diverted forest land shall be used strictly for the purpose specified in the approved proposal and not for any other activity, except for such changes in land use as may be permitted under the Ministry's guideline dated 26.12.2024.

Any future requirement for change in layout or land use, if unavoidable, shall be duly submitted to the competent authority for prior approval before implementation. An undertaking to this effect as furnished by the User Agency is attached herewith as **Annexure – XXXI**.

**26). The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;**

The User Agency has undertaken that; the forest land proposed for diversion shall not, under any circumstances be transferred, leased or assigned to any other agency, department or individual without obtaining prior approval of the Central Government.

The User Agency further undertakes to retain full responsibility for the management, use, and protection of the diverted forest land strictly for the purpose, for which it has been approved. An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXII**.

**27). No damage to the flora and fauna of the adjoining area shall be caused;**

The User Agency has undertaken that; no damage shall be caused to the flora and fauna of the adjoining forest and non-forest areas during the execution and operation of the project. Necessary precautions and mitigation measures shall be implemented to prevent any adverse impact on biodiversity.

The User Agency further undertakes to ensure that; all project-related activities shall be carried out in an environmentally responsible manner under the supervision of competent authorities and any observation or recommendation from the Forest Department regarding protection of flora and fauna shall be strictly complied with.

An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXIII**.

**28). The User Agency shall submit the annual self-compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;**

The User Agency has undertaken to submit the annual self-compliance report in respect of all the stipulated conditions to the State Government, the concerned Regional Office of the Ministry and the Ministry of Environment, Forest and Climate Change by the end of March every year, on a regular basis.

The User Agency further undertakes to ensure that the compliance report shall include updated status of implementation of each condition along with supporting documents, photographs, and relevant evidence for verification by the competent authorities. An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXIV**.

**29) Any other condition that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife; and**

The User Agency has undertaken to abide by any additional condition that may be stipulated by the concerned Regional Office of the Ministry with the approval of the competent authority, in the interest of conservation, protection and development of forests and wildlife.

The User Agency further has undertaken to implement such additional conditions in letter and spirit within the specified time frame and to report the compliance status to the concerned authorities as required. An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXV**.

**30). The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project.**

The User Agency has undertaken to comply with all the provisions of the applicable Acts, Rules, Regulations, Guidelines, and Orders issued by the Hon'ble Courts and the National Green Tribunal (NGT) that are in force or may come into force from time to time in relation to this project.

The User Agency further has undertaken to ensure that all project activities shall be carried out strictly in accordance with the prevailing legal and regulatory framework, and any directions or observations issued by the competent authorities or judicial bodies shall be promptly implemented in true letter and spirit. An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXVI**.

**31). Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of Chapter 1 of the Consolidated Guidelines and Clarifications on Van (Sanrakshan Evam Samvardhan) Adhiniyam, 198 as issued by this Ministry's letter dated 29.12.2023;**

The User Agency has undertaken to ensure strict adherence to all the conditions stipulated in the Stage-I Forest Clearance approval. It is further undertaken that no violation of any of these conditions shall occur during the execution and operation of the project. An undertaking to this effect as submitted by the User Agency is being furnished herewith as **Annexure – XXXVII**.

32). The compliance report shall be uploaded on e-portal (<https://parivesh.nic.in/>)

The User Agency has undertaken to upload the annual and periodic compliance reports in respect of the stipulated conditions on the e-portal (<https://parivesh.nic.in/>) within the prescribed timelines. An undertaking to this effect as submitted by the User Agency is being furnished herewith as Annexure – XXXVIII.

Therefore, the Stage-I compliance report along with all related documents are enclosed herewith for your kind perusal and onward transmission to higher quarters.

Encl: - As above.

  
Divisional Forest Officer  
Sundargarh Forest Division.

Memo No. 8164 4F (Misc)/Dated. 20/12/2025.

Copy forwarded to the Principal Chief Conservator of Forests, Forest Division & Nodal Officer, FC Act, O/o the Principal Chief Conservator of Forests & HoFF, Odisha Bhubaneswar for favour of kind information and necessary action.

  
Divisional Forest Officer  
Sundargarh Forest Division.

Memo No. 8165 4F (Misc)/Dated. 20/12/2025.

Copy forwarded to the Project Officer, Kulda OCP of Basundhara Area MCL, for information and necessary action.

  
Divisional Forest Officer  
Sundargarh Forest Division.