



BHARAT COKING COAL LTD.
A Mini Ratna Company
(A Subsidiary of Coal India Ltd.)
REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005
CIN No. U10101JH1972GO1000918
OFFICE OF THE PROJECT OFFICER, AMP COLLIERY
BARORA AREA



Ref. No. PO/AMPC/AR-I/Env./2025/24

Date: -02.01.2025

03

To,
The District Forest Officer (DFO)
Forest Division, Combined Building
Dhanbad, Jharkhand

13.01.2025
Sub: - Compliance of condition for diversion of 7.6 ha forest land transferred for Muraidih open cast project.

Dear Sir,

With reference to letter no. 10-76/FCE dated 09.06.1997 and letter no.2640 & 2943 dated 07.10.2024 & 23.11.2024, the compliance report against diversion of 7.6 Ha of forest land in Muraidih open cast project in Dhanbad district of Bihar (Jharkhand) is attached.

This is for your kind perusal and needful, please.

Yours faithfully

[Signature]
02/01/2025
Project Officer
AMP Colliery

Encl:-

1. Compliance report.
2. Notification of Govt. of Bihar.
3. Copy of EC.

Cc to:-

1. HoD (Environment), Koyla Bhawan
2. General Manager, Barora Area
3. Area Manger (Estate), Barora Area
4. Area Manager (Survey), Barora Area
5. Area Manager (Envt.), Barora Area

[Signature]
Project Officer
Muraidih Colliery

(A)

**COMPLIANCE OF CONDITION FOR DIVERSION OF 7.6 HA FOREST LAND TRANSFERRED
FOR MURAIIDH OPEN CAST PROJECT**

Compliance against letter no. 10-76/FCE dated 09.06.1997 regarding diversion of 7.6 Ha of forest land for Muraidih open cast project in Dhanbad district of Bihar (Jharkhand).

Sl.No.	Conditions	Compliance																						
1.	Legal status of forest land shall remain unchanged	Legal status of forest land is unchanged.																						
2.	Compensatory afforestation will be raised at the cost of user agency over equivalent non forest land which will be notified as forest land under Indian forest act	<p>For the development of Compensatory afforestation the following non forest land has been provided</p> <table border="1"> <thead> <tr> <th>Mouza</th> <th>Khata no.</th> <th>Plot no.</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Mahuda</td> <td rowspan="4">291</td> <td>1711</td> <td>2.94</td> </tr> <tr> <td>1845</td> <td>10.65</td> </tr> <tr> <td>1846</td> <td></td> </tr> <tr> <td>1858</td> <td>0.09</td> </tr> <tr> <td>Murlidhi</td> <td>54</td> <td>1049</td> <td>5.10</td> </tr> <tr> <td></td> <td></td> <td></td> <td>18.78 Acres (7.6 Ha)</td> </tr> </tbody> </table> <p>Plantation has been developed above said land by BCCL and this land has been notified as forest land. (Copy of notification is attached)</p>	Mouza	Khata no.	Plot no.	Area	Mahuda	291	1711	2.94	1845	10.65	1846		1858	0.09	Murlidhi	54	1049	5.10				18.78 Acres (7.6 Ha)
Mouza	Khata no.	Plot no.	Area																					
Mahuda	291	1711	2.94																					
		1845	10.65																					
		1846																						
		1858	0.09																					
Murlidhi	54	1049	5.10																					
			18.78 Acres (7.6 Ha)																					
3.	Reclamation of mined area will be done at the cost of user agency as proposed in the proposal.	The part of the above land has been mined out and reclaimed, and rest will be reclaimed after mining activities.																						
4.	Lease period shall be coterminous with lease under the MMRD act subject to maximum of 30 years	Agree.																						
5.	This approval is subject to environmental clearance	Environmental clearance granted. (EC order no. J/11015/35/2011- IA.II(M) dt. 06/02/2013) (Copy of EC is attached).																						
6.	The forest land shall not be used for any purpose other than the specified in the proposal.	The acquired forest land has been used for the purpose of mining only.																						
7.	Any other condition that the state government may impose from time to time in the interest of afforestation and protection of forests.	Whatever instruction given by state government and forest department is being complied.																						

Project Officer
Muraidih Colliery
(A)

Project Officer
AMP Colliery

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Government of Bihar
Department of Forest and Environment

Notification

Patna 15;

No. Van Bho Adhi (2)17/97-805-E-VP, Dated 17.7.1997

In exercise of power conferred by section 29 of the Indian Forest Act 1927 (XVth of 1927), the State Government hereby make the provisions of chapter IV of the said Act applicable from the date of issue of the notification on the waste land situated in the district of Dhanbad as specified in the schedule annexed hereto excluding "Idgah land".

The land comprised in this notification shall be called "Protected Forest".

The said land has been made available and transferred to the Department of Forest and Environment, Government of Bihar by Bharat Coking Coal limited (a Government of India Undertaking) in lieu of diversion of 18.78 acres of forest land for Muraidih Opencast Project of Bharat Coking Coal Limited for compensatory afforestation under the provisions of the Forest (Conservation) Act 1980. As a result of this transfer the ownership of this land (whose khatiani Raviyat in Bharat Coking Coal Limited) now belongs to the State Government. The possession of the said land has been taken over by Department of Forest and Environment (Dhanbad Forest Division) and it is free from encroachment, Therefore, the said land is free from rights of any private person or community and hence the proceedings with regard to (enquiry and recording of rights of private persons and community as prescribed in subsection (3) section 29 of Indian Forest Act 1927, is not required.

.....2/-


Project Officer
Muraidih Colliery
(A)

Scanned by CamScanner

Schedule

Dist	Village	Thana	Thana Nos.	Khata No.	Khesra No.	Rakaba (Area) in Acre	Government of Bihar
Dhanbad	Mahuda	Topchanchi	342	291	1711	2.94	
					1845	10.65	
					1846	0.09	
					1858	13.68	
Dhanbad	Murlidhi	Topchanchi	343	54	1049	5.10	
					18.78		

By order of Governor Bihar

Janki Sharan Prasad 17/7/97

(Janki Sharan Prasad)

Additional Secretary to Government.

Ashok/

आपांक वन भूअधिकार संख्या 17/97-805-E/5040 पटना 15, दिनांक 17-7-1997

प्रतिनिधि- अधीक्षक, सीकालक, पुष्पालय, सुल्तानबाग, पटना-7 को इसे बिहार राजपत्र के आगामी असाधारण अंक में प्रकाशितार्थ प्रेषित ।

2- अधीक्षक से अनुरोध है कि मुद्रित राजपत्र को 500 अतिरिक्त प्रतियाँ भवा वन सर्वेक्षण विभाग को भिजवाने का कष्ट करें ।

Janki Sharan Prasad 17/7/97

गानकी शरण प्रसाद

सरकार के अपर सचिव ।

आपांक वन भूअधिकार संख्या 17/97-805-E/5040 पटना 15, दिनांक 17-7-1997

प्रतिनिधि- प्रधान सुब्ब वन निरीक्षक, बिहार, राँची/सुब्ब वन निरीक्षक

विभागाध्यक्ष सह नाभिक नदाधिकारी, बिहार, राँची/सभी क्षेत्रीय सुब्ब वन निरीक्षक

सभी प्रशासकीय आयुक्त/सभी वन निरीक्षक/सभी सहायक स्व सभी वन प्रबंधक नदाधिकारी को सूचार्थ एवं आवश्यक कार्यवाई हेतु प्रेषित ।

Janki Sharan Prasad 17/7/97

गानकी शरण प्रसाद

सरकार के अपर सचिव ।

[Signature]
Project Officer
Muraidih Colliery

(A)

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**IN THE HIGH COURT OF JHARKHAND AT RANCHI
W.P.(C) No.4944 of 2011**

M/s. Bharat Coking Coal Limited, a Government Company within the meaning of S. 617 of the Companies Act, having its registered office at Koyla Bhawan, P.O. Koyla Nagar, P.S. Saraidhella, Dist. Dhanbad through Sri Harendra Kishore s/o Leeladhar Sharma, Head of Department (Legal), BCCL, r/o Kusum Vihar Colony, P.O. Koyla Nagar, P.S. Saraidhella, Dist. Dhanbad. Petitioner.

-Versus-

1. The State of Jharkhand through its Secretary, Forests & Environment Department, Government of Jharkhand, Nepal House, P.O. & P.S. Doranda, Dist. Ranchi.
2. Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, P.S. Jagannathpur, Dist. Ranchi through its Chairman.
3. Member Secretary, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, P.S. Jagannathpur, Dist. Ranchi.
4. Regional Officer, Regional Office-cum-Laboratory, Jharkhand State Pollution Control Board, P.O., P.S. & Dist. Dhanbad.
5. Deputy Commissioner, P.O., P.S. & Dist. Dhanbad. Respondents.

CORAM : HON'BLE MR. JUSTICE RAJESH SHANKAR

For the Petitioner : Mr. Manish Kumar, A.C. to
Mr. Anoop Kumar Mehta, Advocate
For the Res.-State : Mr. Kunal Chandra Suman,
A.C. to G.P. II

Order No.26

Date: 28.01.2025

1. Mr. Manish Kumar, learned A.C. to Mr. Anoop Kumar Mehta, learned counsel for the petitioner, on instruction, prays for withdrawal of the present writ petition.
2. Considering the said prayer, the present writ petition is dismissed as withdrawn.
3. Pending interlocutory application(s), if any, is also dismissed.

(Rajesh Shankar, J.)

Rohit/

an
Project Officer
Muraidih Colliery
(A)

F



भारत सरकार / Government of India
 श्रम एवं रोजगार, मंत्रालय / Ministry of Labour & Employment
 केंद्र सुरक्षा प्राधिकरण / Directorate General of Mines Safety
 मध्य जोन, धनबाद / Central Zone, Dhanbad

सं: आर-3/010212/P-19/2011/844

धनबाद, दिनांक: 24/08/2012

प्रेषक
 खान सुरक्षा निदेशक,
 क्षेत्र सं.-3, धनबाद।

सेवा में-

महोदय, मालिक, मुराईडिह स. त. क. की निदेशक, (पी. एण्ड. एल.)
 नो-नाम को. को. लि.,
 कोयला भवन,
 फो- कैथेला नगर, जिला - धनबाद।



विषय: **Permission under Regulation 107(1) of the Coal Mines Regulation 1957 for amalgamation of Muraidih Colliery and Shatabdi Colliery to form one colliery named as Muraidih Colliery of M/S. BCCL.**

महोदय,

Please refer to your letter No. BCCL/D(T)OP/Sr.ES/F-37/Area-I/2011/112 dated 17/23.11.2011 and the plan enclosed therewith having bearing No. Muraidih/Surface/Amal./2011/01 dated 21.11.2011 on the above subject.

The matter has since been examined on the basis of the information furnished by you. In exercise of the powers conferred on the Chief Inspector of Mines (also designated as Director General of Mines Safety) under Regulations 107(1) of the Coal Mines Regulations, 1957, and by virtue of the authorization granted to me by the Chief Inspector of Mines (also designated as Director General of Mines Safety) under Section 6(1) of the Mines Act, 1952, I, hereby grant you permission for amalgamation of Muraidih Colliery and Shatabdi Colliery to form one colliery with erstwhile name as Muraidih Colliery of M/s. BCCL, shown as **A-B-C-D-E-F-G-H-I-J-K-L-M-A** in the plan No. Muraidih/Surface/Amal./2011/01 dated 21.11.2011, subject to the following conditions being strictly complied:

1. Change of name of the mine shall be notified within seven days from the said change to the Director General of Mines safety and the concerned Dy. Director General of Mines safety and Director of Mines safety in Form-I, as required under Regulations 8(1)(a) of the Coal Mines Regulations, 1957.
2. As required under Regulations 3 of the Coal Mines Regulations, 1957, a plan showing the new boundaries of the Muraidih Colliery after amalgamation to each seam shall be submitted within 7 days of the said change to the Director General of the Mines Safety and the concerned Dy. Director General of Mines

Project Officer
 Muraidih Colliery
Bob



safety and Director of Mines safety. The plans shall also show the coal barrier on all sides of the boundary, in ground-hatched lines, as required under Regulation 107(2) of the Coal Mines Regulations, 1957.

3. Readjusted/new boundaries shall be marked on the surface by surface boundary pillars and shall also be shown on all statutory plans submitted under Regulation 59 of the Coal Mines Regulations, 1957.
4. Statutory vertical barrier shall be maintained all around the mine boundary as required under Regulation 107(2) read with Regulation 234(3) of the Coal Mines Regulations, 1957. Such barrier shall have a minimum width of pillar prescribed under column (5) of table under Regulation 107(2) of the Coal Mines Regulations, 1957 for the bottom most seam.
5. Fresh joint survey plan showing the changed mine boundary shall be prepared with the adjoining mines.
6. Co-ordinates of all important survey stations and every corner of the shaft be calculated correctly and shown on all statutory plans.
7. Letter number and conditions of this permission shall be shown on all statutory plans.
8. All statutory restrictions imposed under the Mines Act, 1952, for Sualahi Colliery in the area being amalgamated shall be applicable for Muraidih colliery.
9. The permission is being issued under the regulation 107(1) of the Coal Mines Regulation, 1957, only, without prejudice to any other provisions of law, which may be or may become applicable at any time.
10. If at any time any one of the conditions subject to which this permission has been granted is violated or not complied with, this permission shall be deemed to have been revoked with immediate effect.
11. Above permission may be amended or withdrawn at any time if considered necessary in the interest of safety and/or conservation of coal.

भवदीय

(एस. एम. सुथर)
खान सुरक्षा निदेशक
क्षेत्र सं. 3, धनबाद

Project Officer.
Muraidih Colliery
Cm2



Bharat Coking Coal Ltd.
(A Subsidiary of Coal India Ltd.)
Office of Director(Tech)P&P
Koyla Bhawan
P.O. Koyla Nagar (Dhanbad)

SHO/107/41/19/1410-1411

The Director General of Mines Safety,
Dhanbad

Subject: Application for amalgamation/merging of two mines of
BCCL, Barora Area i.e. Muraidih & Satabdih Colliery

Dear Sir,

At BCCL, Barora Area, two mines i.e. Muraidih Colliery and
Satabdih OCP are lying adjacent having separate identity separated by common
boundary along Dumra - Funchi DB road.

Earlier there was only one mine called Muraidih Colliery.
However, due to presence of active fire, the fiery portion was separated and a
mine called Satabdih OCP was carved out of Muraidih Colliery. Permission under
Reg. 107 of CMR, 1957, for change of mine boundary with Muraidih Colliery
and Satabdih Mine was granted vide letter No. SHO/107/41/19/1410-1411
dated August, 2000 (copy enclosed for kind reference).

Now that fire has spread to the workings of Muraidih Colliery,
the two mines are the same both from the safety point of view as well as administrative
amalgamation of both the mines has become a necessity with the earlier mine
Muraidih Colliery.

Under the above circumstances, permission may kindly be
accorded for amalgamation of both Muraidih Colliery and Satabdih Mine with the
erstwhile name of Muraidih Colliery under the statutory control of one Agent and
other statutory officials as per CMR, 1957.

Thanking you,

Yours faithfully,

(A. SARKAR)
DIRECTOR (TECH) P&P
BARORA AREA

Copy to:

- 1) Dy. Director General of Mines Safety (CZ), Reg-III, Dhanbad
- 2) Director of Mines Safety (CZ), Region No. III, Dhanbad
- 3) General Manager (Safety & Rescue), BCCL, Koyla Bhawan
- 4) General Manager, BCCL, Barora Area

Project Officer
Muraidih Colliery

Copy

	base date) Reserves "Mt"			
1.5.1 8	Balance Extractable reserves "Mt"		44.564 Mt	
1.5.1 9	Average Grade		W-V and G-9	
1.5.2 0	OB in MM ³		28.96 Mm ³ (in-situ) 17.72 Mm ³ (RH)	
1.5.2 1	SR MM ³ /te (Including RH)		2.48	
1.5.2 2	Mining Technology		Opencast and Longwall	
1.5.2 3	Coal Beneficiation envisaged			
1.5.2 4	Handling of Rejects			
1.5.25	Land use pattern "Ha"	Present Land Use:		
		Land Use	Area (in Ha)	Remarks
		Excavation Area	328.66	
		Backfilled area	245.21	Included in Excavation area
		Excavated void	83.45	Included in Excavation area
		Top Soil dump	4.02	Included in Excavation area
		Haul Road	3.6	Included in Excavation area
		Plantation/Green Belt	99.29	Included in Excavation area
		Plantation/Green Belt	30.51	
		Settling Pond/Water Body	14.13	
		Road Infrastructure Area	8.5	
Garland Drain	3.1			

		Embankment	0.05	
		UG Infrastructure	2.73	
		Undisturbed/ Barren/ Mining Right for UG	241.98	
		Resettlement/Bastee	4.15	
		Agricultural Land	83.9	
		Total	717.71*	
		* Includes 133.69 Ha Forest land		
		Component wise Breakup of Forest Land and Non Forest Land in leasehold area		
		Component	Forest Land (Ha)	Non-Forest Land (Ha)
		Excavation Area(Backfilled Area, Excavated Void, Top Soil Dump, Haul Road, Plantation/Green Belt)	110.71	217.95
		Plantation	0.17	30.34
		Water Body, Settling Pond, Embankment	0.49	13.67
		Infrastructure(Road)	0.20	8.14
		Garland Drain	0	3.10
		UG Infrastructure	0	2.73
		Bastee	0	4.15
		Agricultural Land	0	83.29
		Undisturbed Land	21.47	212.33
		Safety Zone	0.65	8.32
		Total	133.69	584.02
		Post Mining Land Use		
		Land Use	Area (Ha)	
		Plantation/Green belt	341.9	
		Void	98.71	
		Water body/River	5.03	
		Road	4.77	
		Habitation	25.4	
		Free space/Barren	241.9	
		Total	717.71	
1.5.2 6	Reason for revision		NA	

This Mining Plan has been prepared to comply the **statutory requirement** as per Rule 22A of Mineral Concession (Amendment) Rules 2020. This mining plan has also been prepared for forest clearance purpose.


Project Officer
Muraidih Colliery




BHARAT COKING COAL LTD.
 (A Subsidiary of Coal India Ltd.)
 REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005
 CIN No. U10101JH1972GO1000918
OFFICE OF THE PROJECT OFFICER, MURAIIDIH COLLIERY
BARORA AREA



Plan for the Transportation of the Coal from Muraidih Coliery

Sl. no	Parameter	Plans for Transportation
1.	Plan for Transportation From Face to Coal Stock	1. For OCP:- Coal produced from face/mine is to be transported by excavator and dumpers to coal stock yard. 2. For UG:- Coal produced from face is to be transported by belt conveyor/direct haulage to surface.
Coal Stock to End User		
2.	Coal Stock to Railway Siding	Transportation of coal from coal stock to nearby KKC(L) railway siding is proposed to be done through pay loader and tipper. Further, the coal from Railway siding is loaded on wagon by pay loader and transported to different consumer etc., proposed to be through railway network.
3.	Coal Stock to End User by Road (e-Auction Coal)	Coal is being transported to Local end users through covered truck for smaller quantity requirement.

Coal transported to the Railway Siding/local users in Tipper/Trucks which are covered with tarpaulin sheets and the coal transportation road are treated with water sprinkling regularly to prevent dust generation. Overloading of Tipper/Trucks is not allowed by necessary administrative measures.


 Project officer
 Muraidih Colliery
 Project Office
 Muraidih Colliery





दामोदर घाटी निगम / DAMODAR VALLEY CORPORATION
सचिवालय विभाग / Secretariat Department
डीवीसी टावर्स / DVC Towers
वीआईपी रोड, कोलकाता- ७०००५४ / VIP Road, Kolkata - 700 054



संख्या/No. AS/PS/F-14/ 1717

दिनांक/Date: 11-5-22

①

सेवा में/To,

अलग.

The Project Officer
Amalgamated Muraidih Phularitand Colliery
Bharat Coking Coal Limited
Barora Area, P.O.- Nawagarh
Dhanbad - 828306

विषय/Sub: NOC for diversion of Khodo Nala passes through Amalgamated Muraidih Phularitand Colliery falling within Damodar Valley (DV) Area

संदर्भ/Ref: Your letter vide no. PO/AMPC/NOC/2021/2649 dtd. 11/10/2021

आदरणीय महाशय/Dear Sir,

Reference above, NOC is hereby issued to M/s. Bharat Coking Coal Limited (BCCL) for diversion of Khodo Nala passes through Amalgamated Muraidih Phularitand Colliery falling within Damodar Valley (DV) Area in the state of Jharkhand subject to following conditions:

- 1) The responsibility of design, construction, commissioning and operation of scheme including temporary antecedently structures such as diversion, cofferdams, cause ways etc. solely rests with the authorities of BCCL. DVC will not be responsible, in any way, for structural sustainability and inconvenience, if any, caused to the public in case of failure.
- 2) The temporary structure required in connection with the diversion work shall have to be approved by BCCL in order to ensure uninterrupted flow of water and traffic.
In case of crossing of water courses either with moderate flow rate or of torrential nature with marked and unpredictable flooding, adequate survey shall have to be carried out before starting the work with the objective a) for determining, what precautions, are necessary b) for determining the most favourable period for executing the work.
- 3) M/s. BCCL shall arrange to back fill the excavation where ever required as per the technical specification to prevent soil & bank erosion to the satisfaction of authorities having Jurisdictions thereon.
- 4) M/s. BCCL will have to arrange necessary NOCs from State Highways Authorities, National Highways Authorities, District Board Authorities, Public Works Department authorities, Irrigation Department authority & Forest Department authorities etc. for such diversion of nala in the Damodar Valley (DV) Area falling under their domain.
- 5) All safety protocols/ measures are required to be taken up by BCCL mandatorily during diversion work of this nala.
- 6) M/s. BCCL will take all steps for protection of environment and ensure maintenance of ecosystem and will also take steps to control pollutant from mines in to the river/ nalas.

Project Officer
Muraidih Colliery


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- 7) Temporary interventions wherever required for construction of roads, bridges, cause ways etc. need to be created in connection with diverting Nala. Necessary planning & construction shall be done in such a fashion that the structures such created will not obstruct the cross flow of water within the rivers, Nala drains & rivulets i.e. sufficient water ways will have to be ensured to pass maximum probable flood with a provision to ensure upstream and downstream flow at the locations warranted as per site conditions.
- 8) The dimensions of Nala should be proper & constructed in such a manner that discharge carrying capacity of the channel should be maintained as original.
- 9) The soil stabilization at the banks of diverted river should be proper and as per the specifications prevailing in IS Code.
- 10) If there be any future proposal for development in Damodar Valley (DV) Area of Jharkhand by DVC for construction of any structure within the area through which nala pass, the alignment of nala in the reaches, will have to be shifted suitably by M/s. BCCL at their risk and cost.
- 11) Entire cost shall be borne by M/s. BCCL for the above scheme of diversion.
- 12) Non-compliance of any one of the recommendations enumerated above. NOC stands automatically withdrawn.

आपका विश्वासभाजन/ Yours faithfully,


(अपर सचिव/ Additional Secretary)


Project Officer
Muraidh Colliery

(A)



BHARAT COKING COAL LTD.
(A Subsidiary of Coal India Ltd.)
REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005
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OFFICE OF THE PROJECT OFFICER, MURAIIDH COLLIERY
BARORA AREA



UNDERTAKING FOR DIVERSION OF KHUDIA NADI/NALLAH

Muraidih Colliery, BCCL undertakes that Mining activity near Khudia Nadi/Nallah will be done after proper mitigation measures and at present Nadi/Nallah diversion is not required. As per Mining Plan, the diversion of Khudia Nallah/Nadi will be required to make space for a small quarry with III seam base (required in Fifth year) and later on for UG depillaring stage.

Muraidih Colliery, BCCL undertakes to submit NOC from Water Resource Department, Govt. of Jharkhand along with mitigation measures if any before Stage II Approval for Nala Flows through the Mining lease.

Au 12/12/25
Project officer
Muraidih Colliery
Project Officer
Muraidih Colliery



भारत कोकिंग कोल लिमिटेड
(कोल इण्डिया लिमिटेड की एक अनुषंगी कंपनी)
Bharat Coking Coal Limited
(A Subsidiary of Coal India Limited)
(एक मिनिराल कंपनी - A Mineral Company)
(भारत सरकार का उपक्रम - A Government of India Undertaking)

परियोजना पदाधिकारी का कार्यालय, एकीकृतमुराईडीह फुलारीटाँड़ कोलियरी,
बरोरा क्षेत्र, पत्रालय: नवागढ़, जिला

Ref. No.: PO/AMPC/Muraidih UG/Khudia Nala/2025/2104

Date: - 14.10.25

To,
The Executive Engineer,
Tenughat Dam Division,
Tenughat, Bokaro, Jharkhand-829123

Sub.:- Request for No Objection Certificate (NoC) for the diversion of Khudia Nadi

Dear Sir,

In reference to the forest diversion proposal of 133.69 Ha forest land in the leasehold of Muraidih Colliery, a query has been raised by the MoEFCC, Delhi regarding Khudia Nadi, quoted as "The Satellite imagery shows the presence of Khudia Nadi adjacent to the forest land proposed for diversion. The copy of NoC/comments from the Water Resource Department, Govt. of Jharkhand in this regard shall be submitted along with the details of proposed mitigation measures."

The Khudia Nadi flows from west to east within the leasehold of Amalgamated Muraidih Phularitand Colliery (AMPC). An extractable reserve of approx. 4 Million tonne of coal is deposited beneath the course of Khudia Nadi. To extract the coal and to prevent inundation of mine, it is required to divert the 2170 m course of Khudia Nadi. The diversion of Khudia Nadi is integrated with extraction of coal by mass production technology through Muraidih U/G mine of Amalgamated Muraidih Phularitand colliery.

The land involved for the proposed diversion of Khudia Nadi is under the possession of BCCL. The section of the proposed diversion nala is sufficient enough to negotiate with upstream discharge of the nadi and the safety of mine and persons. There is no habitation along the present course and diverted course of Khudia Nadi.

In view of above, it is requested that permission may kindly be granted for the diversion of Khudia Nadi within the leasehold of Amalgamated Muraidih Phularitand Colliery (AMPC) to extract the coal and to preserve water. Accordingly, No objection Certificate (NoC) is sought from your esteemed office.
Thanking you.

Encl.:

1. Copy of plan showing Khudia Nadi
2. Copy of query raised by MoEFCC, Delhi

Yours' faithfully


Project officer
AMP Colliery
(A)

Cc:-

1. GM/HoD (Envt), HQ (through e-mail)
2. GM, Barora area (through e-mail)
3. AGM, Barora area (through e-mail)
4. AM (Envt), Barora area (through e-mail)
5. Office copy



कार्यालय: प्रधान मुख्य वन संरक्षक, वन्यप्राणी
एवं मुख्य वन्यप्राणी प्रतिपालक, झारखण्ड
वन भवन, डोरण्डा, रांची

Email : pccf-wildlife@gov.in, Phone No. 0651-2481744



पत्रांक:-961(WL)P/2025-26-..... दिनांक:-

सेवा में

प्रधान मुख्य वन संरक्षक -सह- कार्यकारी निदेशक,
बंजर भूमि विकास बोर्ड, झारखण्ड, रांची।

विषय:-

मेसर्स बि०सी०सी०एल० की मुराईडीह कोलियरी परियोजना हेतु कुल 133.69 हे० (46.17 हे० वनभूमि एवं 87.52 हे० जंगल-झाड़ी) वनभूमि अपयोजन प्रस्ताव (FP /JH/MIN/44804/2020) के सम्बन्ध में।

प्रसंग:-

आपका ज्ञापांक 633 दिनांक 25.07.2025

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के आलोक में समीक्षोपरान्त अधोहस्ताक्षरी का मतव्य है

कि-

“A Site Specific Wildlife Management Plan shall be prepared at project cost in order to mitigate the negative impact of project activities on wildlife habitat around the project Area.”

विश्वासभाजन,

ह०/-

प्रधान मुख्य वन संरक्षक,
वन्यप्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड।

ज्ञापांक:-961(WL)P/2025-26-856..... दिनांक:- 08/08/2025

प्रतिलिपि- सचिव, वन, पर्यावरण एवं जलवायु परिवर्तन विभाग, झारखण्ड सरकार, रांची को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

सचिव कोपांग वन, पर्यावरण एवं जलवायु परिवर्तन विभाग, सं०3969..... 11 AUG 2025 झारखण्ड, रांची

प्रधान मुख्य वन संरक्षक,
वन्यप्राणी एवं मुख्य वन्यप्राणी प्रतिपालक,
झारखण्ड।

Project Officer
Muraidih Collin

(A)

पत्र संख्या-वन भूमि-25/2025-

3188

व०प०, राँची, दिनांक-

02/09/2025

प्रेषक,

जलज कुमार,
विशेष कार्य पदाधिकारी।

सेवा में,

सहायक वन महानिरीक्षक,
भारत सरकार,
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
इंदिरा पर्यावरण भवन, अलीगज, जोरबाग रोड,
नई दिल्ली-110003

By email
To upload on
Parishasth

विषय :- मेसर्स दी0सी0सी0एल0 की मुराईडीह कोलियरी परियोजना हेतु कुल-133.69 हे० (46.17 हे० वनभूमि एवं 87.52 हे० जंगल-झाड़ी) वनभूमि अपयोजन प्रस्ताव (FP/JH/MIN/44804/2020) के संबंध में।

महाशय,

निदेशानुसार उपर्युक्त विषयक प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची के पत्रांक-633 दिनांक-25.07.2025 एवं प्रधान मुख्य वन संरक्षक, वन्यप्राणी एवं मुख्य वन्यप्राणी प्रतिपालक (CWLW), झारखण्ड, राँची के ज्ञापांक-856 दिनांक-08.08.2025 से प्राप्त मूल प्रस्ताव एवं प्रतिवेदन की छायाप्रति (अनुलग्नक सहित) संलग्न है।

विषयक प्रस्ताव पर राज्य सरकार के निर्णयानुसार निम्नांकित शर्तों के साथ अनुशांसा की जाती है :-

- वनभूमि की वैधानिक स्थिति यथावत् रहेगी।
- माननीय सर्वोच्च न्यायालय के आदेश के अनुरूप प्रस्तावित वनभूमि के NPV की राशि प्रयोक्ता अभिकरण को जमा करना होगा।
- विषयक प्रस्ताव के विरुद्ध धनबाद वन प्रमंडल अंतर्गत चिन्हित 270.44 हे० अवकृष्ट वनभूमि पर क्षतिपूरक वनरोपण की राशि प्रयोक्ता अभिकरण द्वारा देय होगी।
- प्रस्तावित अपयोजन से पड़ने वाले कुप्रभाव को कम करने के उद्देश्य से Site Specific Wildlife Management Plan परियोजना व्यय पर प्रयोक्ता अभिकरण द्वारा तैयार किया जाएगा तथा इसके implementation की राशि प्रयोक्ता अभिकरण द्वारा कैम्पा खाता में जमा की जाएगी।
- अन्य मानक शर्तों का अनुपालन प्रयोक्ता अभिकरण को मान्य होगा।

अनुरोध है कि विषयक प्रस्ताव पर अग्रेत्तर कार्रवाई करने की कृपा की जाय।
अनु०-यथोक्त।

विश्वासभाजन

(जलज कुमार)

विशेष कार्य पदाधिकारी।

ज्ञापांक-वन भूमि-25/2025-3188

व०प०, राँची, दिनांक-

02/09/2025

प्रतिलिपि-उप वन महानिरीक्षक, भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, क्षेत्रीय कार्यालय, द्वितीय तल, झारखण्ड राज्य आवास बोर्ड, मुख्यालय, हरमू चौक, राँची-834002 को अनुलग्नक के साथ सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

अनु०-यथोक्त।

विशेष कार्य पदाधिकारी।

ज्ञापांक-वन भूमि-25/2025-3188

व०प०, राँची, दिनांक-

02/09/2025

प्रतिलिपि-प्रधान मुख्य वन संरक्षक झारखण्ड, राँची/प्रधान मुख्य वन संरक्षक-सह-कार्यकारी निदेशक, बंजर भूमि विकास बोर्ड, झारखण्ड, राँची/महाप्रबंधक, BCCL, कोयला भवन, कोयला नगर, धनबाद को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

विशेष कार्य पदाधिकारी।

ETC

PART - V

(To be filled by the Secretary in Charge of Forest Department or by any other authorized officer of the State Government not below the rank of an Under Secretary)

Diversion of 133.69 ha of Forest Land for Muraidih Colliery in favour of M/S BCCL under Dhanbad Forest Division.

18. Recommendation of the State Government

(Adverse comments made by any officer of authority in Part- B or Part - C or,Part- D above should be specifically commented upon)

Recommended for Diversion of 133.69 ha of Forest Land with conditions as stated in the forwarding letter no ~~3188~~ dated ~~02/09/2025~~

[Handwritten Signature]

Rajdeep Sanjay Lal John

Special Secretary

Forest, Environment & Climate Change Department,
Jharkhand Ranchi.

(Official Seal)

Date:

Place: Ranchi

[Handwritten Signature]
Project Officer
Muraidih Colliery

(A)



BHARAT COKING COAL LTD.
(A Subsidiary of Coal India Ltd.)
REGD. Office: Koyla Bhawan, Koyla Nagar, Dhanbad-826005
CIN No. U10101JH1972GO1000918
OFFICE OF THE PROJECT OFFICER, MURAIIDIH COLLIERY
BARORA AREA



UNDERTAKING FOR IMPLEMENTATION OF APPROVED WILDLIFE
MANAGEMENT PLAN/ STAGE I CONDITIONS

Muraidih Colliery, BCCL undertakes to ensure complete implementation of protection and conservation measures in and around the mining observation area as per approved Wildlife Management Plan/ Stage I conditions in the proposed forest diversion application of Muraidih Colliery (717.71 Ha).


Project officer
Muraidih Colliery


Project Officer
Muraidih Colliery



श्री श्री श्री पत्र

8

Date: - 29.05.2012

Sub:- Criminal Misc. No. 4532 of 2001
 1) Sri Surendra Prasad Sahu
 2) Sri D.P. Singh
 -Vrs-
 1) The State of Jharkhand
 2) The Divisional Forest Officer, Dhanbad
 Forest Division, Dhanbad & Anr.

Placed below the order of Hon'ble Jharkhand High Court, Ranchi, dated 12.04.2012 in Cr. Misc. No. 4532 of 2001 in connection with B.F. Case No. 144 of 2000 pending before Judicial Magistrate, Dhanbad. The crux of the order of Hon'ble Jharkhand High Court, Ranchi is appended below:-

"Here in the instant case, as it appears from the prosecution report that the land is being claimed to be the forest land by virtue of a Notification issued in the year 1964.

No reference is there of any notification issued after expiry of thirty years and as such, it can be easily assumed that after 1964, no notification has been issued in terms of section 30B of the Indian Forest Act and under the situation, one is constrained to hold that the land over which mining activities were done, can never be assumed to be the protected forest land.

Under this situation, no offence can be said to have been committed by the petitioners even if mining activities were undertaken over the land in question.

Accordingly, the entire criminal proceeding of B.F. Case No. 144 of 2000 including the order dated 03.10.2000 is hereby quashed.

In the result, this application is *allowed*."

Submitted please for further direction to the dealing / concerned officials to take appropriate action before Ld. Trial Court, Dhanbad in consultation with conducting Advocate,

Encl: - Certified copy of order dated 12.04.2012 (in original).

HOD (Legal)

(Dr. K. S. Sinha)
 Dy. Manager (Pers.)/IR-L

Sr. Manager (Legal) KB

Pl. has been over the certified copy of order dt 12.4.12 passed by the Hon'ble High Court, Ranchi to the dealing advocate of the case for taking necessary steps for dropping the case which is against the petition. And follow up.

Sr. S.G (Deb)

original c.c. enclosed with this enclosed.

Project Officer
 Muraidih Colliery

157/NOR/LD
 30/5/2012

Criminal Misc. Petition No.4532 of 2001

In the matter of an application under Section 482 of the Criminal Procedure Code.

1. Sri Surendra Prasad Sahu
 2. Sri D.P. Singh
-Petitioners

Versus

1. The State of Jharkhand
 2. The Divisional Forest Officer,
Dhanbad Forest Division, Dhanbad. & Ant.
-Opp. Parties

For the Petitioners : Mr. A.K. Mehta, Advocate
For the State : Mrs. Nikki Sinha, A.P.P.

P R E S E N T

HON'BLE MR. JUSTICE R.R. PRASAD

By Court :

Heard learned counsel appearing for the petitioners and learned counsel appearing for the State.

This application has been filed for quashing of the entire criminal proceeding of B.F. Case No.144 of 2000 including the order dated 03.10.2000 passed by the learned Chief Judicial Magistrate, Dhanbad whereby and whereunder learned Chief Judicial Magistrate, Dhanbad took cognizance of the offence punishable under Section 33 of the Bihar Forest Act, 1927 against the petitioners.

It appears that when these two petitioners and one other person were found indulging themselves in doing mining work over the land situated within the protected forest, an offence report was submitted on 23.11.1998. After investigation, the prosecution report dated 08.08.2000 was submitted, upon which cognizance of the offence was taken on 03.10.2000. That order is under challenge.

Mr. Mehta, learned counsel appearing for the petitioners submits that the petitioners cannot be said to have committed any offence by doing mining work over the land which has been claimed to be the forest land as when the petitioners had earlier been restrained from doing mining work over the piece of land, alleged to be the forest land by the Forest Department, the petitioners did prefer writ application before this Hon'ble Court vide CWJC No.66 of 1999 (R), which was admitted on 11.02.1999 whereby an order was also passed that "during the pendency of the writ petition, the respondents are restrained from interfering with the mining activities of the petitioner in connection with the project commonly known as Muraidih Open Cast Project."

It was further submitted that though the Forest Department has claimed the land as protected forest by virtue of the Notification issued in the year 1964, but it lost its force after expiry of 30 years. Thereafter, no further

Project Officer
Muraidih Colliery

notification has been made and if any further notification would have been made after expiry of thirty years reference should have been made in the prosecution report itself. But since the prosecution report is silent, it can easily be assumed that after 1964, no notification was issued in terms of Section 30 of the Indian Forest Act and on this ground alone, entire prosecution, in view of the decisions rendered in the cases of *Jagdish Mehta vs. State of Jharkhand and others* [2003 (2) J.C.R 525 (Jhr)] and *Janu Khan and others vs. State of Bihar* (AIR 1960 Pat 213) is fit to be quashed.

However, learned counsel appearing for the State submits that there has been a specific allegation that these two petitioners were found doing mining work over the land which was a part of the protected forest land and, thereby, the petitioners are rightly being prosecuted.

I having heard learned counsel appearing for the parties and on perusal of the record, I do find that earlier to lodgment of the instant prosecution, when there was interference on the part of the forest department over the mining work which was being done by these petitioners over a piece of land allegedly the part of the forest land, the petitioners did approach to this Court vide C.W.J.C. No.66 of 1999 (R) whereby this Court vide its order dated 11.02.1999 restrained the respondents from interfering with the mining activities undertaken by the petitioners in connection with the project commonly known as "Muraidih Open Cast Project".

A clear cut stand has been taken that the prosecution, which has been lodged, is with respect to the same "Muraidih Open Cast Project" but it has never been denied. Under this situation, the petitioners cannot be said to have committed any offence.

So far other submission relating to consequence of non-issuance of the notification, after expiry of thirty years is concerned, one needs to take notice of the provision as contained in Section 30B of the Indian Forest Act, which reads as follows:-

" 30. Power to issue notification reserving trees, etc. -

The State Government may, by notification in the Official Gazette, ---

- (a).....
(b) declare that any portion of such forest specified in the notification shall be closed for such term, not exceeding thirty years, as the State Government thinks fit, and that the rights of private persons, if any, over such portion shall be suspended during such terms, provided that the remainder of such forest be sufficient, and in a locality reasonably convenient, for the due exercise of the right suspended in the portion so closed; or
(c).....

Here in the instant case, as it appears from the prosecution report


Project Officer
Muraidih Colliery



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that the land is being claimed to be the forest land by virtue of a Notification issued in the year 1964.

No reference is there of any notification issued after expiry of thirty years and as such, it can be easily assumed that after 1964, no notification has been issued in terms of Section 30B of the Indian Forest Act and under the situation, one is constrained to hold that the land over which mining activities were done, can never be assumed to be the protected forest land..

Under this situation, no offence can be said to have been committed by the petitioners even if mining activities were undertaken over the land in question.

Accordingly, the entire criminal proceeding of B.F. Case No.144 of 2000 including the order dated 03.10.2000 is hereby quashed.

In the result, this application is allowed.

sd/- R.R. Prasad J

Jharkhand High Court, Ranchi
Dated 12nd April, 2012
Ravi/N.A.F.R.

Certified to be true Copy

M. Bhagat
21/4/12
Copying Officer

Designated under Rule 252 (1) of J.R.C. Rules
Authorized by Act of 1877

[Faint handwritten notes]

Project Officer
Muraidih Colliery

(A)



भारत कोकिंग कोल लिमिटेड
(कोल इंडिया लिमिटेड का एक अंग)
एक मिनीरल कंपनी
महाप्रबंधक का कार्यालय, बरोरा क्षेत्र
पोस्ट - नावागढ़, जिला - धनबाद



पंजीकृत कार्यालय - कोयला भवन, कोयला नगर, धनबाद, 826005

पत्रांक-म. प्र./पर्यावरण/वन अपयोजन/2022/

2087

दिनांक- 15.12.2022

सेवामें,

वन प्रमण्डल पदाधिकारी
धनबाद।

विषय- बी. सी. सी. एल. बरोरा क्षेत्र के अन्तर्गत मुराईडीह कोलियरी हेतु प्रस्तावित 133.69 हे. वन भूमि अपयोजन के प्रस्ताव के संबंध में।
सन्दर्भ सं.: आपका पत्रांक - 2776, दिनांक- 06.12.2022

महाशय,

मुराईडीह कोलियरी, बी. सी. सी. एल. के बरोरा क्षेत्र का एक कोल माइनिंग परियोजना है, जो धनबाद जिला में अवस्थित है।

मुराईडीह परियोजना की वन प्रस्ताव की स्थिति निम्न प्रकार है:-

	अधिसूचित वन (हे.)	जंगल झाड़ी (हे.)	कुल वन क्षेत्र (हे.)	
1	7.6	0	7.6	अपयोजित -10-76/FCE दिनांक 09.06.1997
2	46.17	87.52	133.69	वर्तमान प्रस्ताव (FP/JH/MIN/44804/2020 दिनांक 09-03-2020)

बिहार गजट, 1964 एवं उपायुक्त- सह- जिला दण्डाधिकारी, धनबाद के ज्ञापांक-1407, दिनांक 11.04.2022 के अनुसार मुराईडीह कोलियरी, बरोरा क्षेत्र में शेष 133.69 हे. वन भूमि अपयोजन का प्रस्ताव समर्पित किया है, जिसमें 46.17 हे. अधिसूचित वन भूमि तथा शेष 87.52 हे. जंगल-झाड़ी है। पूर्व में OB Dumping किये गए भूमि का विवरण निम्न प्रकार से है:-

OB Dumping			
Notified Forest (Ha)= 34.38 Ha		Jungle Jhari (Ha)= 74.72 Ha	
Up to 1980	23.11	Up to 1996	38.30
After 1980	11.27	After 1996	36.35

वर्तमान में 11.79 हे. अधिसूचित वन भूमि तथा 12.87 हे. जंगल-झाड़ी यथावत (Intact in present) है एवं उस पर कोई OB Dumping नहीं की गयी है। (प्रमाण : अनुलग्नक 3)

श्रीमान् को गह सूचित किया जा रहा है कि वन विभाग द्वारा दावा की गयी वन भूमि, बी. सी. सी. एल. को संसदीय अधिनियम Coking Coal Mine (Nationalisation) Act, 1972 के तहत हस्तांतरित किया गया है और कुछ जगहों पर राष्ट्रीयकरण से पूर्व निजी कंपनियों (Central Kendwadih Colliery, Diamond Phularitand Colliery, East Benedih Colliery, Barora Colliery etc.) द्वारा खदान चलायी गयी है, जो कि भारतीय सर्वेक्षण विभाग, भारत सरकार द्वारा निर्गत शीट संख्या Sheet No. 16, 17 & 22 तथा राष्ट्रीयकरण से पूर्व मानचित्रों/ Plans से स्पष्ट है। (प्रमाण: अनुलग्नक 4, अनुलग्नक 5)

Project Officer
Muraidih Colliery

हालांकि, इस संदर्भ में माननीय उच्च न्यायालय, रांची के आदेश को संदर्भित किया जा सकता है, जिनके अनुसार

Quote

"No reference is there of any notification issued after expiry of thirty years and as such, it can be easily assumed that after 1964, no notification has been issued in terms of Section 30B of the Indian Forest Act and under the situation, one is constrained to hold that the land over which mining activities were done, can never be assumed to be the protected forest land.

Under this situation, no offence can be said to have been committed by the petitioner even if the mining activities were undertaken over the land in question."

Unquote (प्रमाण : अनुलग्नक 1)

माननीय उच्च न्यायालय, रांची के वाद संख्या CWJC-66/1999 में पारित अंतरिम आदेश, दिनांक 11.02.1999 के आलोक में Muraidih Open Cast Project में खनन कार्य किया गया। अंतरिम आदेश के अनुसार

Quote

"During the pendency of the Writ petition, the respondents are restrained from interfering with the mining activities undertaken by the petitioners in connection with the project commonly known as Muraidih Open Cast Project."

Unquote

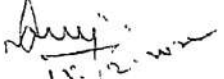
मुराईडीह कोलियरी, बरोरा क्षेत्र हेतु प्रस्तावित 133.69 हे. वन भूमि अपयोजन प्रस्ताव पर माननीय द्वारा निर्देशित सभी NPV और Compensatory Afforestation का भुगतान प्रयोक्ता अभिकरण द्वारा किय जायेगा।


अतः श्रीमान् से विनम्र निवेदन है कि मुराईडीह कोलियरी हेतु प्रस्तावित 133.69 हे. वन भूमि पर यथाशीघ्र कार्यवाही की जाये।

संलग्न:-

1. Judgement of Hon'ble High Court, Ranchi, दिनांक 29.05.2012.
2. उपायुक्त- सह- जिला दण्डाधिकारी, धनबाद ज्ञापांक-1407, दिनांक 11.04.2022
3. AMPC/SURFACE PLAN/2022/262 दिनांक 14.12.2022
4. Sheet No. 16, 17 & 22 by Survey of India (1980-81)
5. Plans of private company pre-nationalization (6 Plans)

भवदीय


15.12.2022
महाप्रबंधक
बरोरा क्षेत्र


Project Officer
Muraidih Colliery
(A)

प्रपत्र-1

प्रमाण-पत्र

प्रमाणित किया जाता है कि अंचल-बाघमारा के मौजा-बरमसिया/105, बरोरा/97, केन्दुआडीह/98, बहालडीह/103 एवं मुराईडीह/104, जिला-धनबाद के खाता एवं प्लॉट में सन्निहित भूमि का कैंडेस्ट्रल सर्वे (CS)/25.10.1980 के पूर्व प्रकाशित अंतिम रिवीजनल सर्वे (RS) का अभिलेख अथक प्रयासों के पश्चात् भी विभिन्न सजस्व अभिलेखागारों, अंचलाधिकारी कार्यालय, जिला अभिलेखागार, भू-अर्जन कार्यालय, बंदोवस्त कार्यालय, सजकीय-मुद्रणमलय आदि में उपलब्ध नहीं हो पाया अथवा जीर्ण-सीर्ण/कटे-फटे अवस्था में है तथा अपठनीय है।

अतः 25.10.1980 को वर्णित भूमि का किस्म क्या था यह पता नहीं चल पा रहा है। संबंधित भूमि का अभिलेख वर्ष 2005 में प्रकाशित वर्तमान रिवीजनल सर्वे के आधार पर अंचल अधिकारी, बाघमारा द्वारा उपलब्ध कराया गया है, जिसकी विवरणी संलग्न है (पृष्ठ सं०-01-42)।

अतः स्पष्ट है कि वर्ष 2005 में प्रकाशित रिवीजनल सर्वे के अनुसार उक्त भूमि वन (संरक्षण) अधिनियम, 1980 के प्रयोजन हेतु वनभूमि की श्रेणी में नहीं आती है।

उपरोक्त संबंध में यह वचनबद्धता दी जाती है कि भविष्य में यदि 25.10.1980 के पूर्व के सर्वे अभिलेखों के आधार पर उक्त भूमि की प्रकृति वन/जंगल-झाड़ी आदि (deemed forest) के रूप में पायी जाती है, तो इसे तत्काल सभी संबंधित कार्यालयों तथा प्रयोक्ता अभिकरण को सूचित किया जायेगा एवं उसके अनुसार संबंधित प्रयोक्ता अभिकरण वन (संरक्षण) अधिनियम, 1980 अंतर्गत परियोजना में सम्मिलित उक्त चिन्हित वनभूमि के अपयोजन का प्रस्ताव समर्पित करने हेतु बाध्य होंगे।

Eo/r

(संदीप सिंह),

उपायुक्त-सह-जिला दण्डाधिकारी,
धनबाद।

ज्ञापांक...1407.../रा०, धनबाद, दिनांक...11.04.2022
प्रतिलिपि:- अध्यक्ष-सह-प्रबंध निदेशक, भारत कोकिंग कोल लि० को सूचनार्थ एवं आवश्यक कार्यार्थ प्रेषित।

(संदीप सिंह),

उपायुक्त-सह-जिला दण्डाधिकारी,
धनबाद।

Project Officer
Muraidih Colliery

(A)



अंचल अधिकारी का कार्यालय, बाघमारा (धनबाद)।

प्रेषक,

पत्रांक-1505/दिनांक-20/12/2023

सेवा में

रवि भूषण प्रसाद, 30030000
अंचल अधिकारी,
बाघमारा।

विषय :-

अपर समाहर्ता,
धनबाद।
वन अपयोजन प्रस्ताव में शामिल गैर-मजरूआ जंगल-झाड़ भूमि के मूल्यांकन प्रतिवेदन का प्रेषण।

प्रसंग :-

बी०सी०सी०एल० का पत्रांक-म०प्र०/क्षेत्र-1/भू०स०वि०/2022/153 दिनांक-27.04.2022 विशेष कार्य पदाधिकारी, वन, पर्यावरण एवं जलवायु परिवर्तन विभाग, झारखण्ड सरकारके आदेश सं०-4715/ब०प०, दिनांक-27.11.2018, विभागीय पत्रांक-4908/रा०, दिनांक-17.12.2019 एवं वन-प्रमण्डल पदाधिकारी, धनबाद का पत्रांक-3547, दिनांक-18.12.2023 तथा भवदीय पत्रांक-4152/रा०, दिनांक-27.10.2023

महोदय,

उपर्युक्त विषयक प्रासंगिक पत्र के आलोक में बरोरा क्षेत्र के अंतर्गत मुराईडीह कोलियरी के खनन पट्टा क्षेत्र में मौजा-बरोरा, मौजा सं०-97, गत् खाता सं०-71, गत् प्लॉट नं०-168, 842 एवं 994 एवं मौजा-बरमसिया, मौजा सं०-105, गत् खाता सं०-28, गत् प्लॉट नं०-4, 245, 340, 356, गत् खाता सं०-9, गत् प्लॉट नं०-324, 257, 258, 275 एवं 339, कुल रकबा-128.38 एकड़ गैर-आबाद जंगल-झाड़ी भूमि के वन अपयोजन हेतु अनापत्ति उपलब्ध कराने हेतु अधियाचना प्राप्त है। प्राप्त अधियाचना के आलोक में भूमि की जाँच प्रतिवेदन संबंधित राजस्व उप-निरीक्षक एवं अंचल निरीक्षक से प्राप्त कर इस कार्यालय के पत्रांक-844, दिनांक-02.08.2023 के द्वारा भवदीय के कार्यालय को प्रेषित की गई थी। पुनः भवदीय के कार्यालय पत्रांक-4152/रा०, दिनांक-27.10.2023 के द्वारा त्रुटि निराकरण हेतु प्राप्त है। त्रुटि का निराकरण कर संसोधित प्रतिवेदन प्रेषित की जा रही है।

वन-प्रमण्डल पदाधिकारी, धनबाद के पत्रांक-3547, दिनांक-18.12.2023 एवं अंचल अमीन से प्राप्त प्रतिवेदन (संलग्न) में वर्णित मौजा अंतर्गत उल्लेखित वन-भूमि की रकबा को छोड़कर वर्णित मौजा-बरोरा/97 अंतर्गत हाल सर्वे के अनुसार रकबा-6.93 एकड़ तथा मौजा-बरमसिया/105 अंतर्गत रकबा-80.54 एकड़ भूमि (कुल सन्निहत रकबा-67.47 एकड़ भूमि की विकरणी खाता/प्लॉट सहित की सूची संलग्न), जो अनाबाद बिहार सरकार के नाम से दर्ज है, जो अंचल अमीन के प्रतिवेदन से स्वतः स्पष्ट है, का मूल्यांकन विभागीय प्रावधानों के आलोक में किया गया है जो निम्नवत् है :-

ग्राम-बरोरा/97 अंतर्गत भूमि के मूल्यांकन की गणना

ग्राम-बरोरा/97 अनुसूची 'क' के अनुसार गत् खाता का प्रस्तावित रकबा-12.08 एकड़ से रूपांतरित होकर हाल खाता में रकबा-6.93 एकड़ भूमि अनाबाद बिहार सरकार के नाम से बनी है। शेष रकबा-5.15 एकड़ रैयती/बी०सी०सी०एल०/आदि रहने के कारण गणना हेतु नहीं लिया गया है। अतः ग्राम-बरोरा/97, हाल खाता सं०-144, प्लॉट नं०-155 P, 158P, 178 एवं अन्य, कुल रकबा-8.93 एकड़ भूमि का लीज राशि की गणना हेतु अंचल कार्यालय के पत्रांक-84, दिनांक-25.01.2023 द्वारा ग्राम-बरोरा/97 के विगत तीन वर्षों का विक्रय हेतु जिला अवर निबंधक, धनबाद को पत्र प्रेषित की गई। जिला अवर निबंधक, धनबाद के पत्रांक-1080 दिनांक-18.04.2023 द्वारा ग्राम-बरोरा/97 के विगत तीन वर्षों के विक्री दलील (Commercial) की प्राप्त सूची निम्नवत् है:-

क्र०	ग्राम/धाना नं०	डीठ नं०	कुल रकबा (हिसाबील में)	कुल विक्रय मूल्य	प्रति डीसमील विक्रय मूल्य	अभ्युक्ति
1	बरोरा/97	2020/DHAN/ 1580/BK1/1478	21.00	1175000	55952.38	Commercial Land
अधिकतम प्रति डीसमील मूल्य वाले 50 प्रतिशत डीठ का प्रति डीसमील औसत मूल्य 55952.38 × 1 = 53952.38						

Project Officer
Muraidih Colony

Scanned with OKEN Scanner

ग्राम-बरोरा/97 का अधिकतम प्रति बीसमील मूल्य वाले 60 प्रतिशत बीड का प्रति बीसमील औसत मूल्य 55952.38/- ₹0 है, जबकि जिला अवर निर्बंधक, धनबाद के दिनांक-01.08.2023 से शहरी क्षेत्र के लिये लागू पुनरीक्षित न्यूनतम मूल्य मार्गदर्शिका पंजी के अनुसार ग्राम-बरोरा/97 का बाजार मूल्य (Commercial) 81,200/-₹0 प्रति बीसमील है। अतः पुंजीकृत मूल्य की गणना अधिकतम प्रति बीसमील मूल्य 81,200/-₹0 के आधार पर होगी।

चूंकि अधियाचना नये संकल्प लागू होने की तिथि से पूर्व की है, अतः प्रस्तावित भूमि की पुंजीकृत मूल्य की गणना राजस्व विभागीय संकल्प सं0-4308/रा0, दिनांक-24.10.2014 एवं झारखण्ड सरकार के पत्रांक-48/रा0, रांची, दिनांक-03.01.2017 के आलोक में किया गया है, जो निम्नवत् है :-

1. प्रस्तावित भूमि का रकबा- 8.93 ए0
2. भूमि का बाजार दर प्रति एकड़ = 81,20,000.00
3. सलामी= बाजार दर X रकबा = 81,20,000.00 X 8.93 ए0 = 5,62,71,800.00
4. लगान = सलामी का 1% = 5,62,718.00
5. सेस = लगान का 75% = 5,62,718.00 X 75% = 4,22,037.00
6. देय राशि = सलामी + लगान एवं सेस का 30 गुना
= 5,62,71,800.00 + (5,62,718.00 + 4,22,037.00) X 30
= 5,62,71,800.00 + 2,95,42,580.00
= 8,58,14,190.00 (आठ करोड़ अन्दावन लाख चौदह हजार एक सौ नब्बे) रुपये मात्र।
7. देय राशि का 80 प्रतिशत-8,86,51,352.00 (छः करोड़ छियासी लाख एक्यावन हजार तीन सौ बावन) ₹0 मात्र।

2) ग्राम-बरमसिया/105 अंतर्गत भूमि के मूल्यांकन की गणना

ग्राम-बरमसिया/105 अनुसूची 'ख' के अनुसार गत खाता का प्रस्तावित रकबा-116.28 एकड़ से रूपांतरित होकर हाल खाता में रकबा-60.54 एकड़ भूमि अनाबाद बिहार सरकार के नाम से बनी है। शेष रकबा-55.74 एकड़ रैयती/बी0सी0सी0एल0/वन भूमि बिहार सरकार आदि रहने के कारण गणना हेतु नहीं लिया गया है। अतः ग्राम-बरमसिया/105, हाल खाता सं0-83, प्लॉट नं0-391, 388, 387 एवं अन्य, कुल रकबा-60.54 एकड़ भूमि का मूल्यांकन की गणना हेतु अंचल कार्यालय के पत्रांक-91, दिनांक-25.01.2023 द्वारा ग्राम-बरमसिया/105 के विगत तीन वर्षों का विक्रयंक हेतु जिला अवर निर्बंधक, धनबाद को पत्र प्रेषित की गई है। जिला अवर निर्बंधक, धनबाद के पत्रांक-434, दिनांक-01.02.2023 द्वारा पत्र प्रेषित कर सूचित किया गया है कि बरमसिया/105 में विगत तीन वर्षों में कोई खरीद बिक्री दलील नहीं हुई है। पुनः अंचल कार्यालय, बाघमारा के पत्रांक-548, दिनांक-22.05.2023 द्वारा जिला अवर निर्बंधक, धनबाद को पत्र प्रेषित कर ग्राम-बरमसिया/105 के निकटवर्ती मौजा-मुराईडीह/104, बहालडीह/103, बरोरा/97 का विगत तीन वर्षों का कय-विक्रय का औकड़ा उपलब्ध कराने का अनुरोध किया गया है। उक्त अनुरोध के आलोक में जिला अवर निर्बंधक, धनबाद का पत्रांक-1182 दिनांक- 29.05.2023 द्वारा पत्र प्राप्त हुआ है, जिसके अनुसार मौजा-मुराईडीह/104, बरोरा/97 में विगत तीन वर्षों में Commercial भूमि की निबंधन हुई है। जिसकी विवरणी निम्नवत् है-

क्र0	ग्राम/थाना नं0	बीड नं0	कुल रकबा (बिसमील में)	कुल विक्रय मूल्य	प्रति बीसमील विक्रय मूल्य	अव्युक्ति
1	मुराईडीह/104	2021/DHAN/6752/ BK1/6195	25.60	550000	21484.37	Commercial Land
2	मुराईडीह/104	2022/DHAN/2652/ BK1/2414	17.10	302000	17660.81	Commercial Land
3	मुराईडीह/104	2023/DHAN/808/ BK1/733	114.50	2020000	17641.92	Commercial Land
4	मुराईडीह/104	2022/DHAN/1903/ BK1/1735	228.17	4025300	17641.67	Commercial Land

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दिनांक- (1) एवं (2) के अनुसार अधिकतम प्रति बीसमील मूल्य वाले 60 प्रतिशत बीड का प्रति बीसमील औसत मूल्य 89145.18 + 2 = 19572.59

क्र0	ग्राम/थाना नं0	बीड नं0	कुल रकबा (बिसमील में)	कुल विक्रय मूल्य	प्रति बीसमील विक्रय मूल्य	अव्युक्ति
1	बरोरा/97	2020/DHAN/1360/ BK1/1778	21.00	1175000	55952.38	Commercial Land

अधिकतम प्रति बीसमील मूल्य वाले 60 प्रतिशत बीड का प्रति बीसमील औसत मूल्य 55952.38 + 1 = 55952.38

23
ग्राम-मुराईडीह/104 एवं बरोरा/97 का अधिकतम प्रति डीसमील मूल्य वाले 50 प्रतिशत डीह का प्रति डीसमील औसत मूल्य क्रमशः 19572.59/- ₹0 एवं 55952.38/- ₹0 है, जबकि जिला अवर निबंधक, धनबाद के दिनांक-01.08.2023 से प्राप्ति क्षेत्र के लिये लागू पुनरीक्षित न्यूनतम मूल्य मार्गदर्शिका पंजी के अनुसार ग्राम-बरमसिया/106 का बाजार मूल्य (Commercial) 14310/- ₹0 प्रति डीसमील है। अतः पुंजीकृत मूल्य की गणना अधिकतम प्रति डीसमील मूल्य 55952.38/- ₹0 के आधार पर होगी।

चूंकि अधियाचना नये संकल्प लागू होने की तिथि से पूर्व की है, अतः प्रस्तावित भूमि की पुंजीकृत मूल्य की गणना राजस्व विभागीय संकल्प सं०-4308/रा०, दिनांक-24.10.2014 एवं झारखण्ड सरकार के पत्रांक-48/रा०, रांची, दिनांक-03.01.2017 के आलोक में निम्नवत् है :-

1. प्रस्तावित भूमि का रकबा- 60.54 ए०
2. भूमि का बाजार दर प्रति एकड़ = 55,95,238.00
3. सलामी= बाजार दर X रकबा = 55,95,238.00 X 60.54 ए० = 33,87,35,709.00
4. लगान = सलामी का 1% = 33,87,357.00
5. सेस = लगान का 75% = 33,87,357.00 X 75% = 25,40,518.00
6. देय राशि = सलामी + लगान एवं सेस का 80 गुना
= 33,87,35,709.00 + (33,87,357.00 + 25,40,518.00) X 80
= 33,87,35,709.00 + 17,78,36,250.00
= 51,65,71,959.00 (एकावन करोड़ पैंसठ लाख एकहत्तर हजार नौ सौ उनसठ) रुपये मात्र।
7. देय राशि का 80 प्रतिशत :-41,32,57,567.00 (एकतालीस करोड़ बत्तीस लाख सन्तावन हजार पाँच सौ सड़सठ) ₹0 मात्र।

अनुशासित एवं सादर समर्पित।

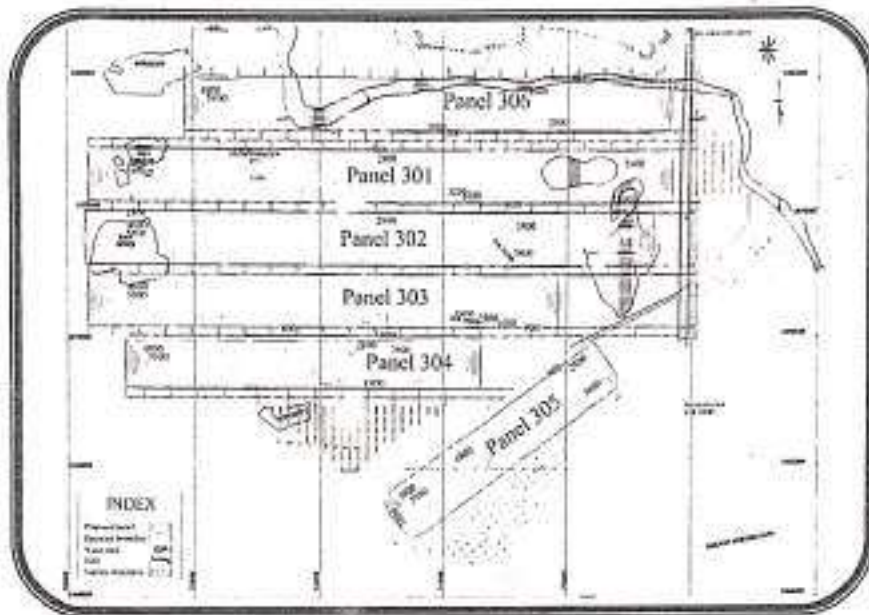
विश्वासनाजन


अंचल अधिकारी,
बाघमारा।


Project Officer
Muraidih Colliery

REPORT

on

**ADVICE ON SUBSIDENCE PREDICTION DUE TO EXTRACTION OF
LONGWAL PANELS OF SEAM-III AND SEAM-I OF MURAIIDIH
UNDERGROUND MINE, BARORA AREA, BHARAT COKING
COAL LIMITED**

July, 2021

MINE SUBSIDENCE AND SURVEYING
CSIR-CENTRAL INSTITUTE OF MINING & FUEL RESEARCH
(A Constituent of Council of Scientific & Industrial Research)
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REPORT
on
**ADVICE ON SUBSIDENCE PREDICTION DUE TO EXTRACTION OF
LONGWALL PANELS OF SEAM-III AND SEAM-I OF MURAIIDIH
UNDERGROUND MINE, BARORA AREA, BHARAT COKING COAL
LIMITED**


Project No. CNP/5024/2020-2021

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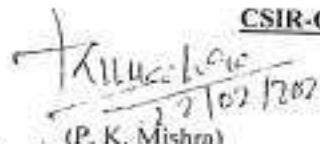
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Signature of the Project Proponents


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

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EXECUTIVE SUMMARY

Muraidih lease boundary of Bharat Coking Coal Limited (BCCL) is situated in western of Jharia coalfield in Dhanbad district of Jharkhand. Muraidih underground mining is proposed to extract 12 panels (six from Seam III and six from Seam I) by longwall method which lies below the Muraidih opencast mine and partly Shatabdi opencast mine. All the above seams i.e. VIIC, VIIB, VIIIA and V/VI/VII (combined seam) were extracted by opencast mining and presently filled with overburden dump. Length of the proposed panels varies from 1052 m to 2331.7 m and the width of 200 m will be kept for all the panels. The depth of cover of the proposed panels of seam-III varies between 38.85 m to 160 m. The important surface structures over the proposed panels are Khodo valley colony, SOCP office, Khodo nala, plantations, eco restoration site and water tank. Possibility of water is expected at the bottom of the overburden dump. The subsidence prediction is done by modified influence function method for the proposed 12 panels at the surface as well as on the floor of combined seam to assess the impact of mining on the surface structures and seepage of water to the underground workings from safety perspective.

The subsidence prediction done using modified influence function method due to extraction of 4.5 m thick coal of 6 panels of seam-III and 3.5 m thick coal of 6 panels of seam-I with caving considering 100 percent extraction on surface as well as on the floor combined seam led to the following conclusion and recommendation:

1. The maximum subsidence, slope, compressive and tensile strain on the floor of combined seam due to extraction of 12 panels are 5939 mm, 166 mm/m, 51.60 mm/m and 44.04 mm/m respectively.
2. The maximum subsidence, slope, compressive and tensile strain at the surface due to extraction of 12 panels are 5936 mm, 91.1mm/m, 32.58 mm/m and 40.96 mm/m respectively.
3. The above magnitude of ground movements are much above the safe limit (i.e. tensile strain of 3 mm/m) at surface as well as on the floor of combined seam. The anticipated strain values would affect the surface structures and features.

4. It is recommended to follow strictly the remedial measures detailed in Table 3 for safety viewpoint.
5. It is also recommended to monitor subsidence movements during depillaring of the panels to know the actual movement to validate the subsidence prediction model as well as to assess the impacts on surface structures.


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1.0 INTRODUCTION

Muraidih lease boundary of Bharat Coking Coal Limited (BCCL) is situated in western of Jharia coalfield in Dhanbad district of Jharkhand. Muraidih underground mining is located between latitudes $23^{\circ}47'19''$ to $23^{\circ}48'30''$ N and longitudes $86^{\circ}13'11''$ to $86^{\circ}15'24''$ E, falling within the lease boundary. It is proposed to extract virgin coal seams (Seam III and Seam I) lying below V/VI/VIII seam (combined seam) by underground mechanized mining method. The overlying combined seam was extracted by opencast mining years back and presently it is backfilled with plantations. It is proposed to extract 12 panels (six from Seam III and six from Seam I) by longwall method which lies below the Muraidih opencast mine and partly Shatabdi opencast mine. Therefore, colliery management requested CSIR-Central Institute of Mining and Fuel Research (CIMFR), Dhanbad to assess on prediction of subsidence, strains (tensile and compressive) and slopes due to longwall mining on subsurface and at surface for safety evaluation of surface properties. The subsidence prediction is done by modified influence function method. This report covers the prediction of subsidence, slope and strains due to extraction of the proposed panels from seam- III and seam-I using three dimensional modeling.

2.0 GEOLOGY

Sickle shaped Jharia coalfield belongs to Gondwana group of Permian age. Lower Gondwana formations of Jharia coalfield lie unconformably on the Archaean and consist of rocks of the Talchir and Damuda series. Damuda series comprises Barakar Measures, Barren Measures and Raniganj Measures. The rocks of Raniganj Measures occupy an area of about 54 km^2 , those of Barakar Formation occupy about 218 km^2 , and rocks of Barren Measures and Talchir Series comprise of 181 km^2 . Geologically, it consists (from bottom to top) of Archaean Metamorphics separated by unconformity from Talchirs, which is overlain by coal bearing Barakars, Barren Measures (devoid of coal) and Raniganj Formations (coal bearing). Barakar Formation with 18 persistent seams and Raniganj Formation with 12 persistent seams are the only coal bearing formations having very good quality coking (prime coking) coals of India. Structurally, it has witnessed a series of step faulting and severe folding at places. Generalized stratigraphic succession of Jharia coalfield is depicted in Table 1.

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Table 1: Generalized stratigraphic succession of Jharia coalfield

Age	Formation	Thickness (m)	Lithology
Recent	Recent	30	Alluvium/Sandy soil, sandy clay, gravel etc.
Jurassic	Igneous Intrusive		Dykes and sills of dolerite & mica periodotite
Upper Permian	Raniganj	725	Micaceous fine to medium grained sandstone, shale & coal seams
Middle Permian	Barren Measures	625	Coarse to medium grained sandstone, carbonaceous shale
Lower Permian	Barakar	1250	Conglomerate, gritty sandstone, shale, carbonaceous shale and coal seams
Upper Carboniferous Permian	Talchir	250	Coarse grained sandstone, green splintery shale and basal boulder beds
----- Unconformity -----			
PreCambrian	Metamorphics		Granite Gneisses and schists

3.0 GEO-MINING DETAILS

Coal seam encountered in boreholes of Muraidih leasehold area are VIII C, VIII B, VIII A, V/VI/VII (combined seam), IV(top), IV(bottom), III, II and I. Incrop/outcrop of all these seams occur within the lease boundary of the Muraidih mine. All the above seams i.e. VIII C, VIII B, VIII A and V/VI/VII (combined seam) were extracted by opencast mining and presently abandoned. Opencast workings are filled with overburden dump and the surface is enveloped with large plantations. IV(top), IV(bottom), III, II and I seams are virgin except in small areas near incrop/outcrop region. Seam III was exploited by opencast as well as developed by Bord & Pillar method in patches till 1988. Seam III and seam I are proposed to be extracted by powered support longwall technology. Seam IV and seam II are not considered for underground mining thickness and inconsistency of seams.

The boundary of the underground mining has been delineated as 15 m hard cover line of seam-I, Maheshpur dyke located towards south, Khudia nala towards east and N.L. Muraidih Railway siding & common mine boundary line between Phularitand and Muraidih collieries towards

west. Lithology of the strata above the proposed panels is dominated by sandstone followed by intercalation of shale and sandstone. The number of seams with partings is exhibited by one of the borehole sections located nearly at the centre of the study area (borehole no. MR14), shown in Fig. 1.

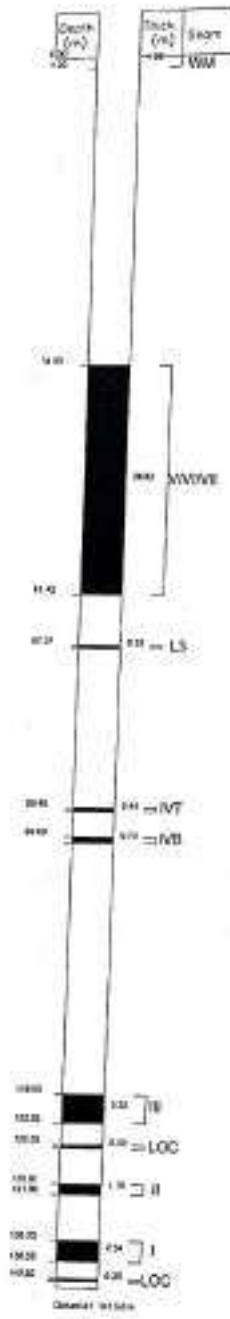


Fig. 1: Borehole section of MR14

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6y

The average thickness of the overburden is 55.11 m. Hard strata commence below floor of the combined seam. A total of 12 panels are proposed to be extracted by longwall mining i.e. 6 from seam-III and 6 from seam-I superimposed vertically. Length of the proposed panels varies from 1052 m to 2331.7 m and the width of 200 m will be kept for all the panels. The gradient of the seam is 1 in 6. The depth of cover of the proposed panels of seam-III varies between 38.85 m to 160 m. Possibility of water is expected at the bottom of the overburden dump. The important surface structures over the proposed panels are Khodo valley colony, SOCP office, Khodo nala, plantations, eco restoration site and water tank as shown in Fig. 2. There is an active fire over the two proposed panels. Geo-mining details of extraction are given in Table 2. The average parting between the seams were determined based on the borehole data.

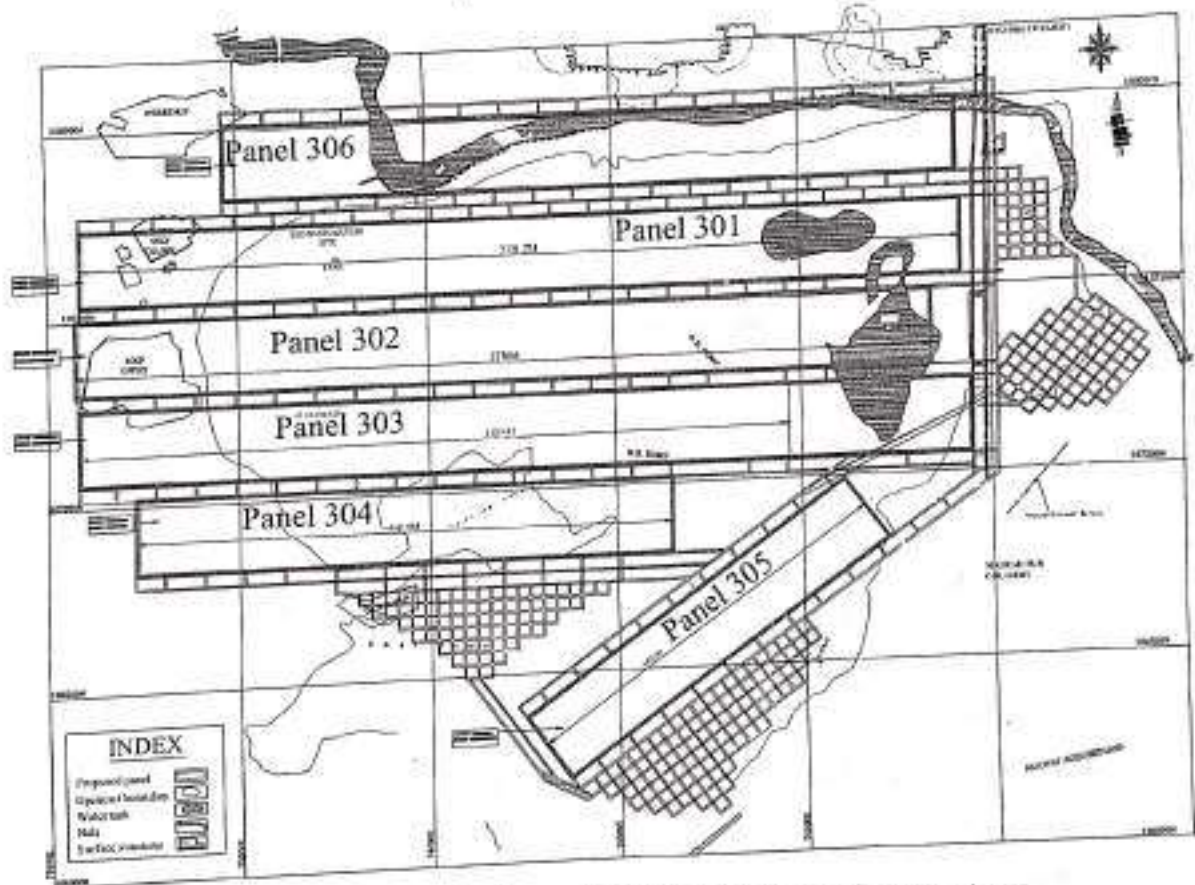


Fig. 2: Proposed panels of seam-III with overlying surface structures

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Table 2: Geo-mining details of proposed panels

Sl. No.	Parameters	Details	
1	Seam	III	I
2	Number of panels	6	6
3	Extraction thickness (m)	4.5	3.5
4	Dimension a) Length (m) b) Width (m)	1052.0 to 2331.7 200	
5	Mining method	Longwall	
6	Percentage of extraction	100	46
7	Seam inclination	1 in 6	
8	Depth-m		
	8.1 Minimum	38.85	54.65
	8.2 Maximum	160	175.8
9	Average parting (m)		
	9.1 Between surface and combined seam	55.11	
	9.2 Between combined seam and seam-III	50.23	
	9.3 Between seam-III and seam-I	15.80	
10	Overlying old goaves	nil	
11	Surface structures	Khodo valley colony, SOCP office, Khodo nala, plantations, eco restoration site and water tank	
12	Goaf treatment	caving	

4.0 SUBSIDENCE PREDICTION

In the current scientific study, the main objective is to predict the subsidence movements caused due to extraction of proposed 12 panels from seam-III & seam-I and its impact on overlying surface structures and features. The impact of subsidence will also be predicted at the floor of combined seam as existence of water is anticipated over it due to overburden dump.

Subsidence prediction is done with the help of three-dimensional subsidence prediction model using influence function method. This model can predict the three-dimensional subsidence

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trough with slopes and strains at any point on the trough quite accurately (Anon., 1999). In this study, three-dimensional subsidence prediction program has been used, which employs influence function method. This method has also been validated from subsidence observations from various Indian coalfields (Anon., 1999 and Sheorey et al., 2000). Calculation approach is outlined in Annexure I.

5.0 METHODOLOGY

The methodology adopted for subsidence prediction with the principles of influence function method is explained in the references mentioned in the previous section. Subsidence movements due to the extraction of proposed 12 panels on the surface as well as on the floor of combined seam with caving have been modeled. The values of subsidence, compressive and tensile strains and slope have been obtained at each grid point on the surface and combined seam floor due to extraction of the proposed 12 panels together from seam-III and seam-I.

6.0 ASSUMPTIONS

1. Subsidence investigations have already been conducted with caving in different Indian coalfields. The subsidence factor of 0.69 has been taken in the prediction model against maximum possible subsidence for extraction of coal from seam-III due to single-seam extraction and 0.81 for seam-I due to multi-seam extraction at Muraidih underground mine.
2. Subsidence prediction is done assuming 100% void as the proposed method of mining is by longwall.
3. A Non-Effective Width (NEW) of 0.40 times the depth of extraction have been taken in the model for working in 6 panels of seam-III with single-seam mining condition in Jharia coalfield.
4. The value of NEW in multi-seam workings was found to be as low as 0.2 in Jharia coalfield (Prakash, Kumar and Singh, 2014). Hence, NEW of 0.20 times the depth of extraction have been taken in the model for working in 6 panels of seam-I with multi-seam mining in Jharia coalfield.
5. The angle of draw is taken 20° on positive side in modeling for 6 panels of seam-III and 25° on positive side for 6 panels of seam-I by taking single-seam and multi-seam mining condition into consideration respectively.


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6. A grid of 10 m spacing in X and Y directions is employed for subsidence prediction.
7. All the input parameters considered for the current study are applicable to this particular problem alone and, therefore, should not be generalized for other mine in the same area.
8. Input parameters for subsidence analysis are furnished in Annexure II.

7.0 RESULTS

7.1 Maximum Subsidence, Slope and Strains

The subsidence prediction has been done for proposed 12 panels of seam-III and seam-I. The values of maximum subsidence, maximum slope, maximum compressive strain and maximum tensile strain are predicted at each grid point with the help of three dimensional subsidence predictions modeling using modified influence function method of the proposed panels with caving at Muraidih underground mine. The anticipated maximum subsidence, slope, compressive and tensile strain at surface and floor of combined seam due to extraction of 12 panels are given in Table 3. The magnitude of ground movements are much above safe limit of 3 mm/m strain for the floor of combined seam and existing surface structures as well.

Table 3: Anticipated ground movements due to extraction of 12 panels of seam-III and seam-I

Location →	Floor of combined seam				Surface				
	Seam ↓	Maximum subsidence (mm)	Maximum slope (mm/m)	Maximum tensile strain (mm/m)	Maximum compressive strain (mm/m)	Maximum subsidence (mm)	Maximum slope (mm/m)	Maximum tensile strain (mm/m)	Maximum compressive strain (mm/m)
III		3104	103	16.9	19.24	3101	54.5	10.12	12.10
III + I		5939	166	44.04	51.60	5936	91.1	40.96	32.58

7.2 Subsidence and Strain Contours

Result of three dimensional subsidence prediction modeling using modified influence function method is shown in the form of subsidence and strain contours. The anticipated subsidence contour at surface due to extraction of 4.5 m thick coal of 6 panels of seam-III and 3.5 m thick coal of 6 panels of seam-I with caving considering 100 percent extraction is shown in Fig. 3. Subsidence of more than 5800 mm is anticipated above all the panels as per the contour plot. The corresponding anticipated strain contour at the surface is shown in Fig. 4.


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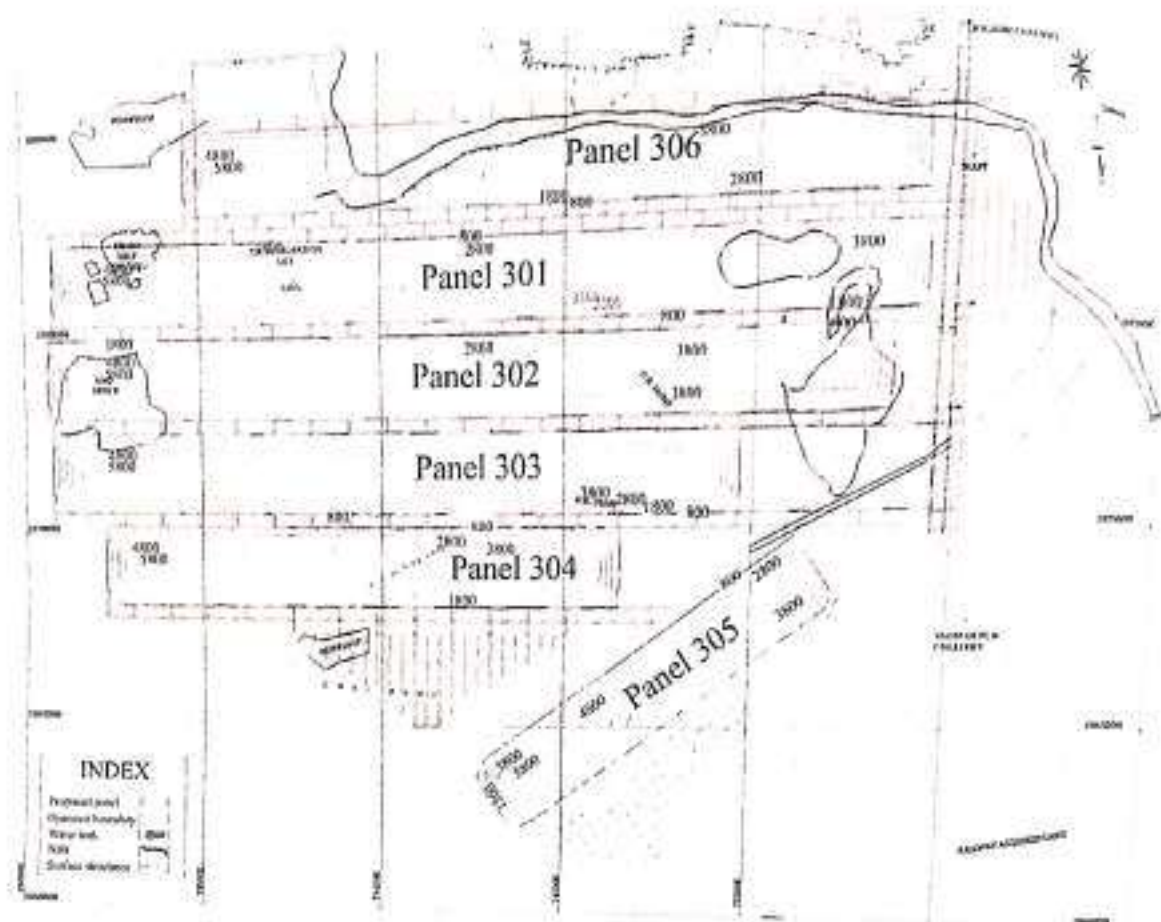



Fig. 3: Anticipated subsidence contour at surface due to extraction of 12 panels

8.0 SUBSIDENCE MANAGEMENT AND REMEDIAL MEASURES

The predictive model showed that magnitude of maximum subsidence, maximum slope, maximum compressive and tensile strains at the floor of combined seam due to extraction of 4.50 m height of seam-III and 3.50 m height of seam-I are 5939 mm, 166 mm/m, 51.60 mm/m and 44.04 mm/m respectively whereas the corresponding predicted values at the surface are 5936 mm, 91.1mm/m, 32.58 mm/m and 40.96 mm/m respectively. Depression of more than 5800 mm in the central part of trough is anticipated above all the panels. The strain values are much above the safe limit (maximum strain < 3 mm/m) for the above surface structures as well as for the floor of combined seam. The subsidence aspects i.e. expected development of strains with remedial measures are proposed for the safety of surface structures and mining operation as deciphered in Table 3.

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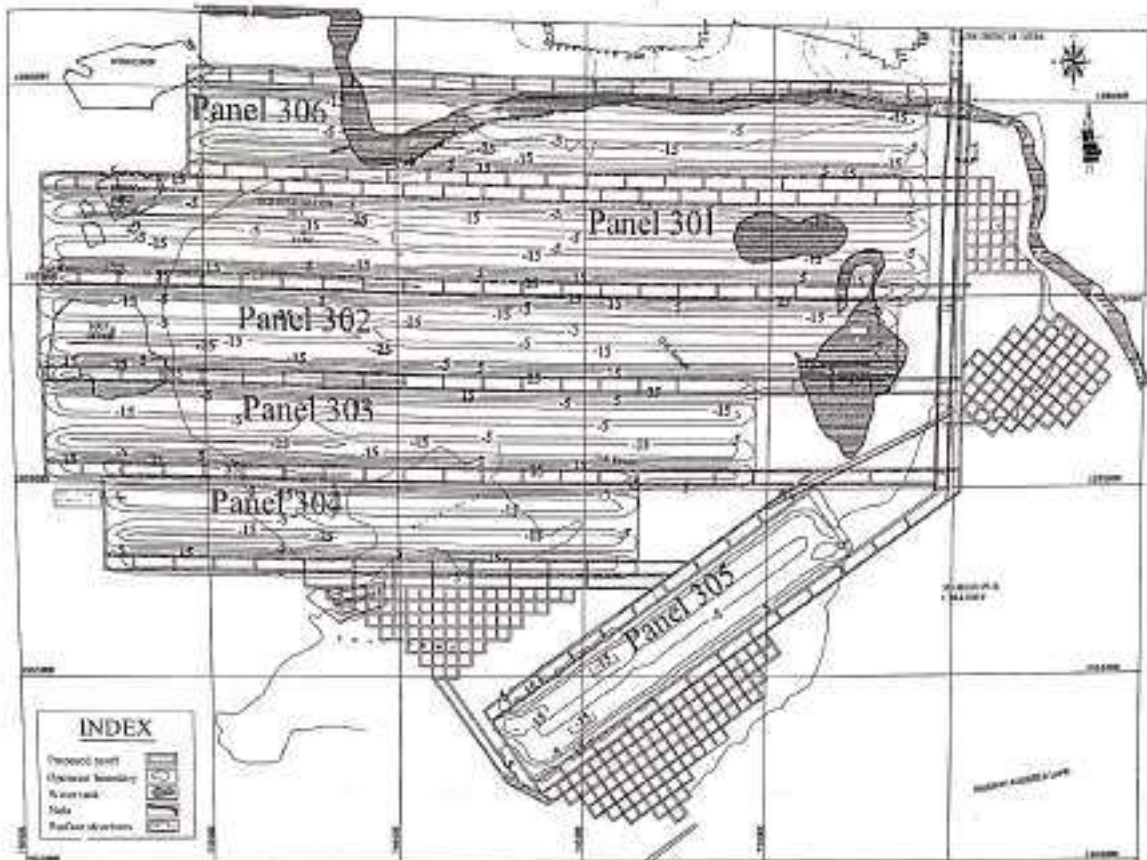


Fig. 4: Anticipated strain contour at surface due to extraction of 5S panel of XIV seam

Table 3: Anticipated impacts with remedial measures on surface structures

Sl. No.	Location	Surface structures	Possible impacts	Remedial measures
1	Above all panels	Dump with plantation	<ul style="list-style-type: none"> • High strain values indicate development of large cracks on the floor of combined seam. • Loose ground due to dump would lead to formation of large cracks at the surface. • Percolation of surface water and rain water up to the 	<ul style="list-style-type: none"> • Dozing of ground immediately after extraction of each panel to prevent water accumulation in subsidence trough as well as breathing of air. • Suitable drainage

Sl. No.	Location	Surface structures	Possible impacts	Remedial measures
			<p>workings of seam-III and seam-I is expected.</p> <ul style="list-style-type: none"> Falling of trees are expected at the edge of the panels 	<p>should be made to avoid any water logging at the surface to prevent inflow of water to underground workings.</p> <ul style="list-style-type: none"> Floor of the combined seam must be free from water accumulation. Regular pumping of water to be done.
2	Panel 301	Khodo valley colony	<ul style="list-style-type: none"> Predicted compressive strain is above 25 mm/m. Surface structures will get damaged. 	<ul style="list-style-type: none"> Colony needs to be shifted for safety of people
		Pond	<ul style="list-style-type: none"> Predicted compressive and tensile strains are above 15 mm/m. Development of large cracks is expected. 	<ul style="list-style-type: none"> Pond must be kept dry by pumping of water prior to commencement of depillaring
3	Panel 302	SOCP office	<ul style="list-style-type: none"> Predicted compressive and tensile strains are above 35 mm/m and 25 mm/m respectively. Development of large cracks with crevices of 100 to 200 mm at the surface is expected. 	<ul style="list-style-type: none"> Office need to be shifted. Area should be dozed and leveled.
		Pond	<ul style="list-style-type: none"> Same as mentioned for Panel 	<ul style="list-style-type: none"> Same as mentioned for

Sl. No.	Location	Surface structures	Possible impacts	Remedial measures
			302	Panel 302
4	Panel 303	Part of SOCP office	<ul style="list-style-type: none"> • Predicted compressive and tensile strains are above 15 mm/m. • Development of large cracks is expected. 	• Same as mentioned for Panel 302
		Part of active fire in combined seam	<ul style="list-style-type: none"> • Predicted compressive strain is above 25 mm/m. • Development of large cracks is expected leading to breathing of noxious gas in underground workings 	• Patch of fire zone must be removed before depillaring operation.
5	Panel 304	Active fire	• Same as mentioned for Panel 303	• Same as mentioned for Panel 303
6	Panel 305	Free from surface structures		
7	Panel 306	Khodo nala	• Predicted compressive and tensile strains are above 25 mm/m and 15 mm/m respectively.	• Nala should be diverted before depillaring

In addition to above mentioned preventive measures, the surface area around the periphery of the proposed underground mining must be fenced and regularly monitored to prevent the movement of outsiders and cattle.


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9.0 CONCLUSION AND RECOMMENDATION

Twelve panels (6 from seam-III and 6 from seam-I) are proposed to be extracted by powered support longwall mining. The important surface structures over the proposed panels Khodo valley colony, SOCP office, Khodo nala, plantations, eco restoration site and water tank. Top seams up to combined seam was worked by opencast mining and presently filled with overburden dump. Thus, modeling was done to predict subsidence at the surface as well as on the floor of combined seam to assess the impact of mining at different locations and seepage of water to the underground workings from safety perspective.

The subsidence prediction done using modified influence function method due to extraction of 4.5 m thick coal of 6 panels of seam-III and 3.5 m thick coal of 6 panels of seam-I with caving considering 100 percent extraction on surface as well as on the floor combined seam led to the following conclusion and recommendation:

1. The maximum subsidence, slope, compressive and tensile strain on the floor of combined seam due to extraction of 12 panels are 5939 mm, 166 mm/m, 51.60 mm/m and 44.04 mm/m respectively.
2. The maximum subsidence, slope, compressive and tensile strain at the surface due to extraction of 12 panels are 5936 mm, 91.1mm/m, 32.58 mm/m and 40.96 mm/m respectively.
3. The above magnitude of ground movements are much above the safe limit (i.e. tensile strain of 3 mm/m) at surface as well as on the floor of combined seam. The anticipated strain values would affect the surface structures and features.
4. It is recommended to follow strictly the remedial measures detailed in Table 3 for safety viewpoint.
5. It is also recommended to monitor subsidence movements during depillaring of the panels to know the actual movement to validate the subsidence prediction model as well as to assess the impacts on surface structures.


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11.0 REFERENCES

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- Sheorey, P. R., John Loui P., Singh K.B. and Singh S.K. (2000). Ground subsidence observations and a modified influence function method for complete subsidence prediction. **International Journal of Rock Mechanics & Mining Sciences**, 37, pp 801-818.
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- Prakash A., Kumar A. and Singh K. B. (2014): Subsidence prediction for stowed panel under multi-seam workings in Jharia Coalfield, India, **MineTech**, Vol. 35, No. 1, Jan-Mar, pp 21-28.


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Calculation by Influence Function method

Since the workings in seams as per production program were found to be situated irregularly in three-dimensions, not always vertically superimposed, the influence function method is of great use in finding out subsidence parameters (Anon., 1999). This method is suitable for all types of depillaring workings, irrespective of shape, size or different rates of retreat of extraction in successive seams. Each infinitesimal (small) sector 'dA' is regarded as an extraction element and has its own weighting factor according to its placement in the influence circle. An influence circle has radius $H \tan \theta$ where H is depth of working and θ is angle of draw (Fig. A1). The following is the modified influence function used in CIMFR – subsidence software.

$$K_r = \frac{0.532}{R^2} \left(1 + \cos \frac{\pi r}{R} \right)$$

-- 1

Where,

K_r = influence function for subsidence,

R = radius of influence circle and

r = radial distance of sector centroid from centre of influence circle

$$\iint_{A_0} K_r dA = 1$$

-- 2

Where, A_0 is the area of influence circle.

The subsidence at point P on the surface or a chosen plane of reference is simply the sum of multiplications of weighting factors and maximum possible subsidence (S_{max}), considered all the extraction elements of the proposed extraction panel. S_{max} is given as follows:

$$S_{max} = a.m.e$$

-- 3

Where,

a = subsidence factor

m = height of extraction and

e = percentage of extraction expressed in ratio

Annexure I

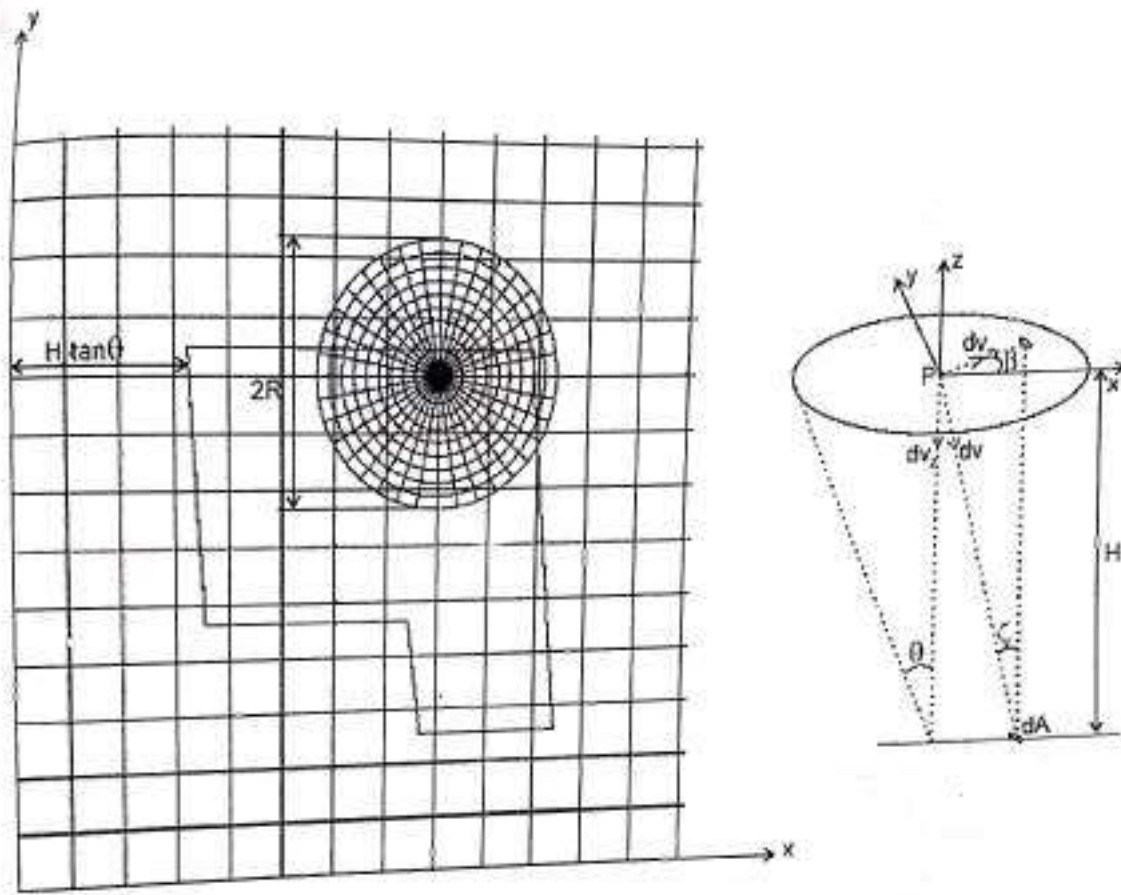


Fig. A1: Illustration of influence function method

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Input parameters for subsidence prediction

Parameters	Seam-III		Seam-I	
	Surface	Floor of combined seam	Surface	Floor of combined seam
Average depth of working	105.99	50.24	116.80	69.04
Angle of draw (°)	20	20	25	25
Subsidence factor	0.69	0.69	0.81	0.81
Non Effective width	0.20	0.20	0.40	0.40
Height of extraction (m)	4.50	4.50	3.50	3.50
Grid pattern	10 m x 10m	10 m x 10m	10 m x 10m	10 m x 10m
Mining condition	Single seam		Multi-seam	

panel 1 Faceline start 73466.94 107811.51 end 75412.27 108004.47 angle 135
 1 73466.94 107811.51
 2 73467.41 108011.51
 3 75412.27 108004.47
 4 75411.80 107804.47

panel 2 Faceline start 73086.41 107537.89 end 75422.25 107729.44 angle 135
 1 73086.41 107537.89
 2 73086.51 107737.85
 3 75422.25 107729.44
 4 75421.78 107529.44

panel 3 Faceline start 73072.73 107297.94 end 75343.87 107489.71 angle 135
 1 73072.73 107297.94
 2 73073.20 107497.94
 3 75343.87 107489.71
 4 75343.10 107289.72

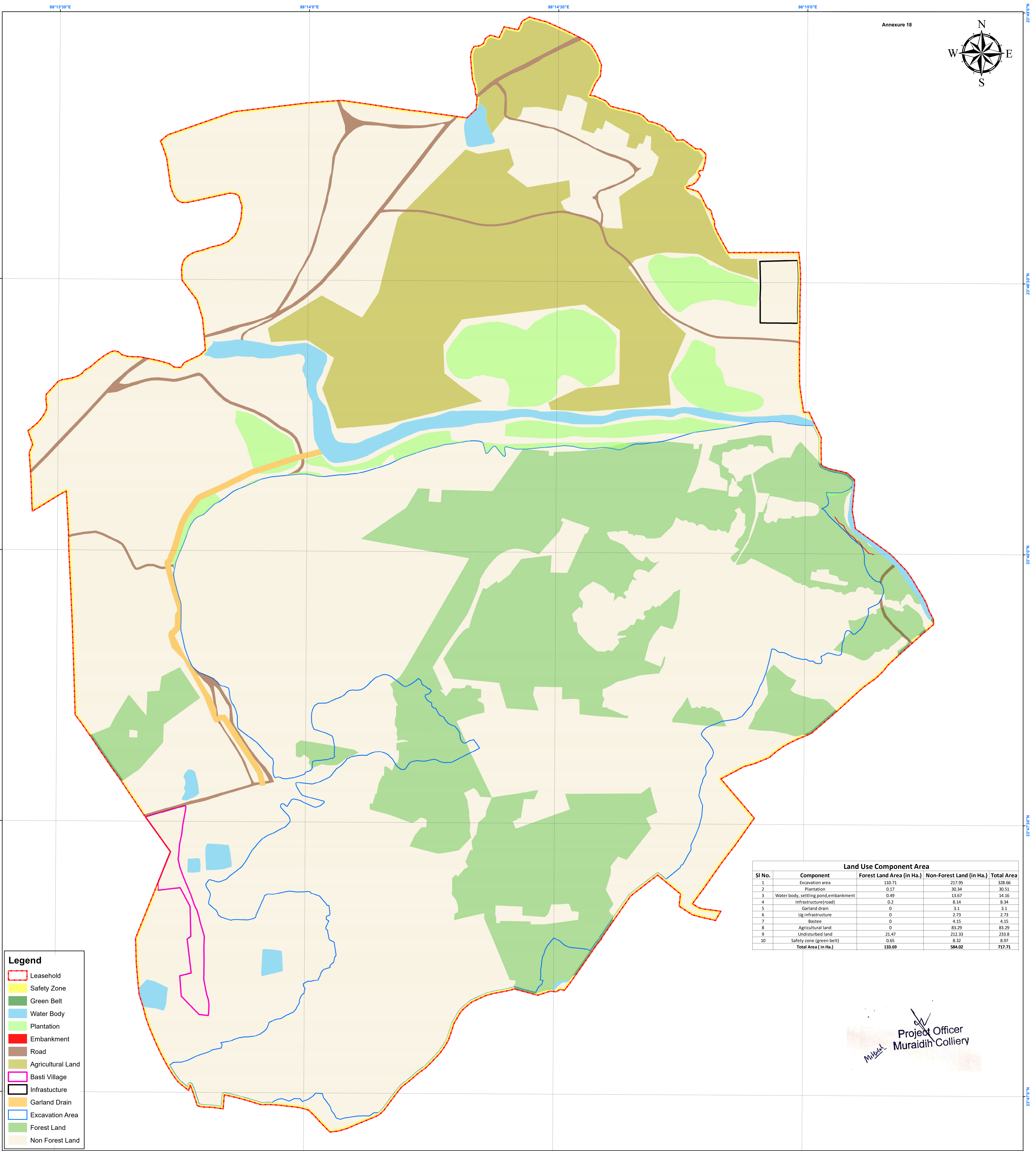
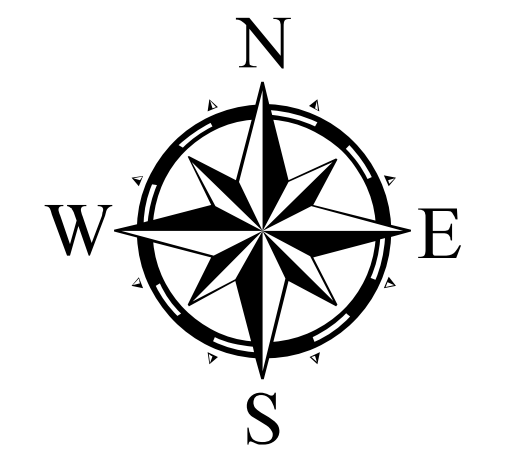
panel 4 Faceline start 73081.61 107057.91 end 74965.75 107251.08 angle 135
 1 73081.61 107057.91
 2 73082.08 107257.90
 3 74965.75 107251.08
 4 74965.52 107051.11

panel 5 Faceline start 73230.13 106817.37 end 74649.60 107012.23 angle 135
 1 73230.13 106817.37
 2 73230.60 107017.37
 3 74649.60 107012.23
 4 74649.13 106812.23

measure II

panel 6	Faceline start	74368.24	106218.35	end	75109.94	106990.34	angle	135
1		74368.24	106218.35					
2		74251.97	106381.09					
3		75109.94	106990.34					
4		75226.11	106827.74					


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Legend

- Leasehold
- Safety Zone
- Green Belt
- Water Body
- Plantation
- Embankment
- Road
- Agricultural Land
- Basti Village
- Infrastructure
- Garland Drain
- Excavation Area
- Forest Land
- Non Forest Land

Land Use Component Area

Sl No.	Component	Forest Land Area (in Ha.)	Non-Forest Land (in Ha.)	Total Area
1	Excavation area	110.71	217.95	328.66
2	Plantation	0.17	30.34	30.51
3	Water body, settling pond, embankment	0.49	13.67	14.16
4	Infrastructure (road)	0.2	8.14	8.34
5	Garland drain	0	3.1	3.1
6	Ug infrastructure	0	2.73	2.73
7	Bastee	0	4.15	4.15
8	Agricultural land	0	83.29	83.29
9	Undisturbed land	21.47	212.33	233.8
10	Safety zone (green belt)	0.65	8.32	8.97
	Total Area (in Ha.)	133.69	584.02	717.71

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Barmasia

वेल्थ सर्वे नम्बर ५३२ MASTER COPY
कलक्टर री रजिस्टर नम्बर ४६

मौजा बारमासिया

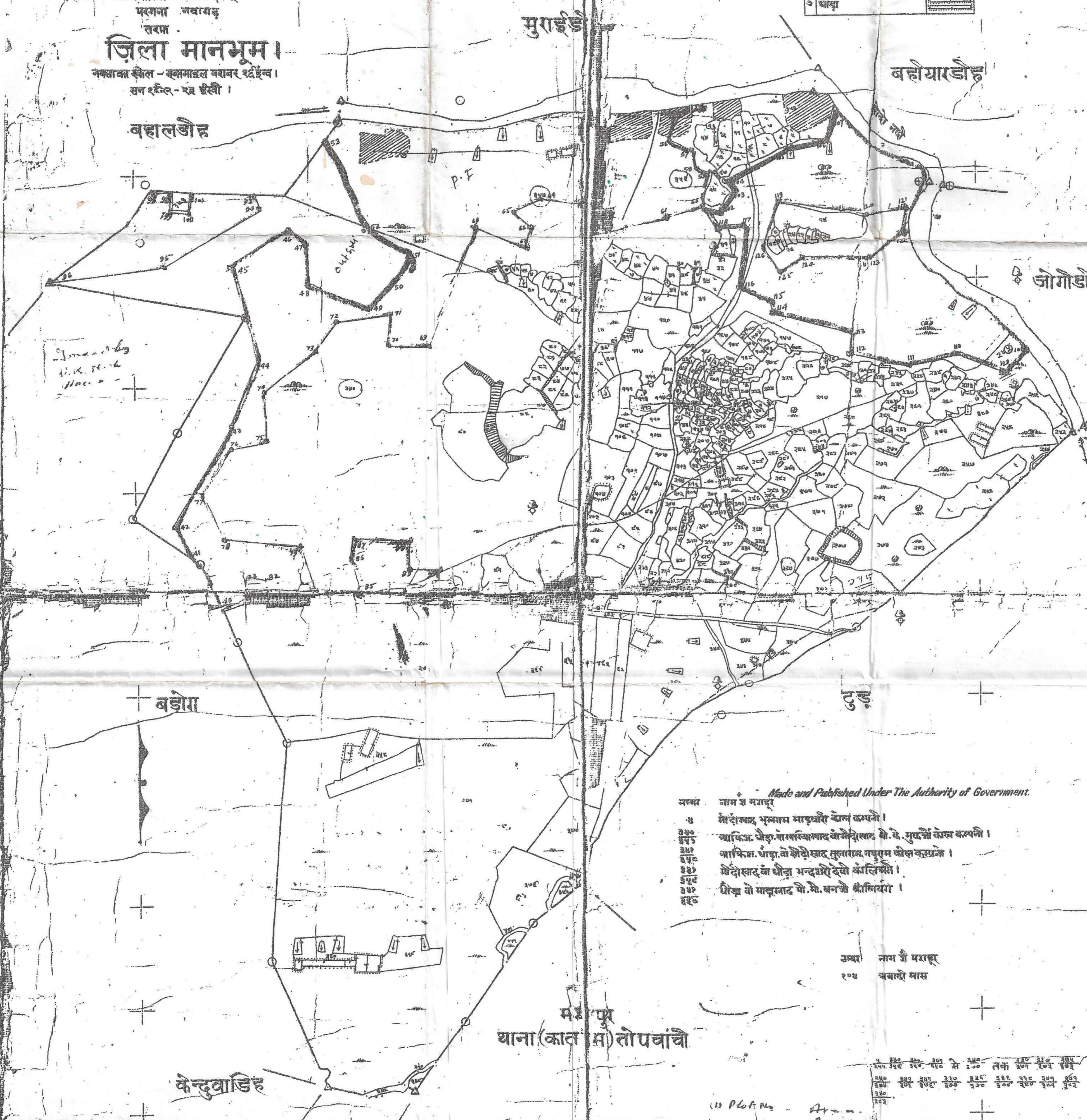
थाना तोपचांचो नम्बर १०५
परगना अवातारु
तरफ

ज़िला मानभूम।

नक्शाका कोला - बलमाडल नम्बर १६३
सप १६३२ - २३ ईस्वी।

नमुना आनापत कोनिय्या।

१	चिमनो	○
२	इलोखाद	●
३	हवा चानक	⊙
४	सोखोखाद	⊞
५	पारबनियारखण्ड	▨
६	बनना आदिपत्रा वाचु वास	▩
७	धोडा	▧



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नम्बर नाम अ सराफर
५ मोदाखद भुवसम भापुधोर कोन कम्पनी।
३५० आफिउर धोडा. पारबनियारखण्ड को मोदीखाद को. के. मुदको कोन कम्पनी।
३५१ आफि. भा. भा. को मोदीखाद तुलाराम, नवसम कोन कम्पनी।
३५२ मोदीखाद को धोडा भन्धोर देवो कोनिय्या।
३५३ धोडा को माधुनाद को. मो. बनओ कोनिय्या।
३५४
३५५
३५६

उम्बरा नाम अ सराफर
१०५ अवातारु वास

महापुत्र थाना (कातरास) तोपचांचो

३५०	३५१	३५२	३५३	३५४	३५५	३५६	३५७
३५०	३५१	३५२	३५३	३५४	३५५	३५६	३५७
३५०	३५१	३५२	३५३	३५४	३५५	३५६	३५७

नमुना आनापत।

१	यह निजान	कोन खारिज समभाजाय्या	नम्बर
२	धर मय अनाम		
३	पक्षा कुवा		
४	पाथा (रेल, अरु कोलिपती इत्यादि)		

(1) Plot No. - Area

१	२६ - ३०
२	० - ४०
३	० - ७२
४	३० - १२
५	५ - ९८
६	२४ - ००

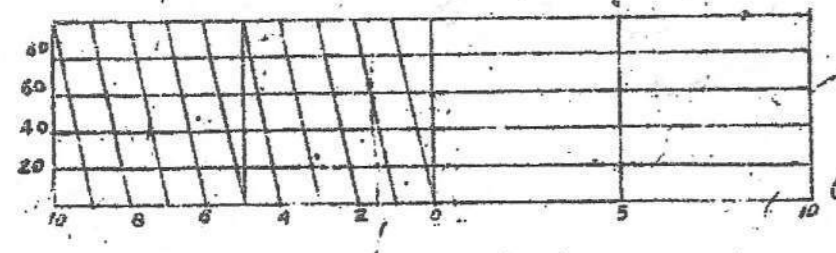
Total area - १२.२४

M. K. R. K. K. K.
Superintendent of Survey.

(2) Total length of boundary line 4 miles 18 chains 0 link
shown in green.

(3) Total no of pillars on the boundary line of the P.F. 87. 12

Scale 16 inches = 1 Mile



Manabon Division

दिनांक 31.01.2020 को वन प्रमण्डल पदाधिकारी, धनबाद के अध्यक्षता में बी०सी०सी०एल० के पदाधिकारियों के साथ आहूत बैठक की कार्यवाही।

उपस्थिति-

1. श्री विमल लकड़ा, भा०व०से०, वन प्रमण्डल पदाधिकारी, धनबाद।
2. श्री राजकुमार, भू-प्रबंधक, पर्यावरण विभाग (मु०), बी०सी०सी०एल०।
3. श्री गौतम कुमार गुलशन, क्षे०प्र० (भू-सम्पदा), बरोरा क्षेत्र, बी०सी०सी०एल०।
4. श्रीमति मीना कुमारी, पर्यावरण विभाग, बी०सी०सी०एल०।
5. श्री प्रवेश कुमार यादव, पर्यावरण विभाग (बरोरा एरिया), बी०सी०सी०एल०।
6. श्री रंजीत सिंह, भू-सम्पदा विभाग (बरोरा एरिया), बी०सी०सी०एल०।

सर्वप्रथम बैठक में वन प्रमण्डल पदाधिकारी, धनबाद ने उपस्थित सभी पदाधिकारियों का स्वागत किया गया। तत्पश्चात बैठक की कार्यवाही प्रारम्भ की गयी-

वन प्रमण्डल पदाधिकारी, धनबाद द्वारा बैठक में उपस्थित बी०सी०सी०एल० के पदाधिकारियों से वन (संरक्षण) अधिनियम 1980 के तहत वन भूमि अपयोजन के तहत लम्बित प्रस्तावों के संबंध में वर्तमान स्थिति की जानकारी ली गई। इस पर बैठक में उपस्थित श्री राजकुमार, भू-प्रबंधक, पर्यावरण विभाग (मु०), बी०सी०सी०एल० द्वारा बताया गया कि सरकार द्वारा दिये गये सभी निर्देश एवं वन, पर्यावरण एवं जलवायु परिवर्तन विभाग द्वारा वन (संरक्षण) अधिनियम 1980 के तहत बी०सी०सी०एल० के विभिन्न कोलयरियों को दिये गये Stage-I & Stage-II में लगाये गए शर्तों का अनुपालन किया जा रहा है। वन प्रमण्डल पदाधिकारी, धनबाद द्वारा सभी पदाधिकारियों को यह निर्देश दिया गया कि कही भी कोयला खनन करने के पूर्व यह आश्वस्त हो ले कि वह वन भूमि है या नहीं। बैठक में उपस्थित श्री प्रवेश कुमार यादव द्वारा बताया गया कि बरोरा एरिया के अन्तर्गत दो प्रस्ताव 29.75 हे० एवं 16.42 हे० वन (संरक्षण) अधिनियम 1980 के तहत समर्पित है एवं अनुपालन हेतु बी०सी०सी०एल० के स्तर पर लम्बित है। उक्त दोनों मामला बरोरा एवं बरमसिया मौजा से संबंधित है। उनके द्वारा यह भी बताया गया कि इस दोनों प्रस्तावों के संबंध में वन विभाग के उच्चाधिकारियों से वार्ता हुई है। उनके द्वारा बताया गया कि दोनों प्रस्तावों को एक ही प्रस्ताव में सम्मिलित कर समर्पित करेंगे। वन प्रमण्डल पदाधिकारी द्वारा निदेशित किया गया कि पूर्व में समर्पित दोनों प्रस्तावों को वापस कर एक नया समेकित प्रस्ताव बी०सी०सी०एल० के द्वारा समर्पित किया जाय। साथ ही निदेश दिया गया कि दोनों मौजा में नक्शा पर सीमांकित वन भूमि का रकवा दर्शाये गये 37.36 हे०


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बरमसिया एवं 10.12 हे0 बरोरा) में वर्णित रकवा के आधार पर ही प्रस्ताव समर्पित किये जाय।
वन प्रमण्डल पदाधिकारी द्वारा यह भी निदेश दिया गया कि परियोजना क्षेत्र में आने वाले सभी
जंगल-झाड़ी भूमि के रकवा को अपयोजित किये जाने वाले वन भूमि के रकवा में शामिल किया
जाय।

वन प्रमण्डल पदाधिकारी, धनबाद द्वारा किए गए अनुरोध पर बी0सी0सी0एल0
के पदाधिकारी द्वारा सहमति व्यक्त की गई।

अन्त में धन्यवाद ज्ञापन के बाद बैठक की कार्यवाही समाप्त की गयी।

ह0/-
वन प्रमण्डल पदाधिकारी,
धनबाद।

ज्ञापांक- 272 दिनांक- 06.02.2020

प्रतिलिपि- महाप्रबंधक (पर्यावरण), बी0सी0सी0एल0/महाप्रबंधक, बरोरा क्षेत्र,
बी0सी0सी0एल0 को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित। अनुरोध है कि बैठक में लिये
गए निर्णय का अनुपालन सुनिश्चित कराने की कृपा की जाय।


25-2-2020
वन प्रमण्डल पदाधिकारी,
धनबाद।


Project Officer
Muradiah Colliery