S.L. NO. 31/25

BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONAL BENCH, KOLKATA, WEST BENGAL
FINANCE CENTRE, 3RD FLOOR, NEW TOWN

MEMORANDUM OF APPLICATION

Original Application No.164/2024/EZ

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 083/2022 KOLKATA

IN THE MATTER OF:

Debasis Biswas

...Applicant

-versus-

State of West Bengal & Ors.

...Respondents

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10 FEB 2025

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IN THE MATTER OF:

Debasis Biswas

...Applicant

-versus-

State of West Bengal & Ors.

...Respondents

COUNTER AFFIDAVIT ON BEHALF OF THE RESPONDENT NO. 10

I, Himangshu Santra, son of late Gangaram Santra, aged about 58 years, by faith Hindu, by occupation Business, residing at Village Maniari, Eklakhi, District- Purba Bardhwan-Pin-713427, do hereby solemnly affirm and say as follows:

1. I am fully acquainted with the facts and circumstances of the case partly from my own knowledge and partly from the records made available to me, which are maintained by the answering Respondent in the usual course of its business. I am competent to affirm this Affidavit and I solemnly affirm and say as follows:

2. I say that a letter of Intent was granted on 26/11/18 with reference to e auction bearing ID No.217_DMBUW_676, for grant of mining lease in sand block, Burdwan-kalinagar/181(P), 205(P)/F, over an

area of 6.04 acres. The copy of the letter of Intent is annexed herewith and marked as annexurc A. The letter of Intent was also extended on 14/11/22, copy of the LOI extension is annexed herewith and marked as annexure B.

3. I say that the Mining Plan and progressive Mine Closure Plan was issued on 27/10/21. The mining plan was duly approved by the Chief mining officer Government of West Bengal. Copy of the mining plan is annexed herewith and marked as annexure C.

4. I say that the State Level Expert Committee in its 41st meeting on 7/06/24 approved the Terms of reference of kalinagar Sand Mine, the answering respondent is waiting to obtain Environmental Clearence. Copy of the relevant pages of the 41st meeting is annexed herewith and marked as annexure D.

5. I say that the answering respondent is waiting to obtain environmental clearance and only thereafter a lease deed can be executed.

6. I say that the said Original Application is misconceived and not maintainable in law or in the facts of the case. The said petition is based entirely on falsehood. Now dealing with the original application, I say as follows:

(i) With respect to paragraphs 1,2 & 3 , I say that it is a matter of record , and therefore the same does not merit any reply in itself.

(ii) I say that with respect to paragraph 4, I say that I am yet to be granted a lease for the kalinagar sand mine (herein after referred to as the said sand block) , I deny that I am mining illegally in the said sand block, the distance of the sand block from my residence is 55 kilometer, it is not possible for me to keep an eye on the said sand block.

(iii) I say that with regard to paragraph 5.1, 5.2, 5.3, 5.4,5.5 & 5.6 I deny and dispute all allegation made in the said paragraphs,

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Isay that mining plan is prepared by an agency and then approved by the concerned authority, it is not possible for me to prepare the mining plan. I say that it is clearly stated in the 41st minutes of meeting by SEAC that the answering respondent will submit the EIA/EMP which will include a detailed study of the baseline condition and impact on aquatic flora and fauna for grant of Environmental Clearence. The LOI of the answering respondent was extended on 14/11/22 as the State Level Expert Committee in its 41st meeting on 7/06/24 approved the Terms of Reference, the answering respondent have already prepared the EIA in accordance with the terms of Reference and submitted the EIA for public hearing during the end of November 2024. The answering respondent is waiting for public hearing to be conducted by the respondent authorities.

(iv) With regard to paragraph 5.7, 5.8, 5.9, 5.10, 5.11, 5.12,5.13,5.14 & 6 I deny that I am mining sand illegally causing damage to Environment , I am yet to obtain a lease on the said sand mine. The local hooligans illegally mine in that area, The Applicant is a opponent sand miner and with the intention of harassing the answering respondent have filed this instant Original Application. This Application is not maintainable and the answering respondent prays for dismissal in limine.

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(v) I state that the Original Application is affirmed and filed before this Hon'ble Tribunal by the Applicant with malafide purposes and come before the Hon'ble Tribunal with unclean hands. I say that the correct facts are as narrated by the answering respondent and supported by the necessary documents annexed herewith

(vi) I say that the Original Application is only supported by representations made by the Applicant to the respondent

authorities, the Applicant have not annexed a single document to show that the answering respondent is carrying on illegal mining. The representations made by the Applicant are all false with a malafide intention to harass the answering respondent, as the answering respondent is the business opponent of the Applicant.

7. I say that no case has been made out in the said application and therefore the relief as prayed in the said application may be denied.

8. The deponent reserves the right to file further affidavit, if necessary, and prays that leave be granted for the same.

9. That the statements made in paragraphs 1 to 6(ii), 6(iii) are true to my knowledge, and those made in paragraphs 6(i), 6(iv), 6(v),6(vi), are my humble submissions before this Hon'ble Tribunal.

VERIFICATION

I, Himangshu Santra, son of late Gangaram Santra, aged about 58 years, by faith Hindu, by occupation Business, residing at Village Maniari, Eklakhi, District- Purba Bardhwan, Pin-713427 do hereby verify that the contents of the paragraphs 1 to 10 are based on information and/or derived from sources which I verily believe to be true and I have not suppressed any material facts and circumstances and the rest are my humble submissions.

Himangshu Santra
Signature of the applicant

Identified by me:
Miss Anowar
Advocate

DATE:

PLACE:

Advocate

Identified by me
Paushali Banerjee
Advocate

Identified by me
Miss Anowar
Advocate

Solemnly affirmed and declared
Before me on identification
PARAMITA PAL
City Civil Court
Kolkata
Reg. No. 083/2022

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083/2022
KOLKATA

10 FEB 2025

GOVERNMENT OF WEST BENGAL

OFFICE OF THE DISTRICT LAND & LAND REFORMS OFFICER

PURBA BARDHAMAN

P.O. RAJBATI, BARDHAMAN, PIN CODE: 713104
Phone no.0342-2530641 / Fax no.0342-2533348/e-mail: dlroburdwan@gmail.com

Memo. No.:304/1287F / AUCTION 17/MM/18 **Dated: 26/11/2018**

To
HIMANSHU SANTRA
MANIARI, EKLAKHI
BARDHAMAN - 713427

Sub: Letter of Intent (LOI) with reference to e-auction bearing ID No. 2017_DMBUW_676 conducted on 02/08/2017 for grant of mining lease for sand in sand block BURDWAN-II/KALINAGAR/181(P), 205(P)/F located in plot No.s 181(P), 205(P) in Mouza- KALINAGAR J.L. No. 160, P.S. MADHABDIHI, District Purba Bardhaman over an area of 6.04 acres (2.44 hectares).

Background

1. The District Committee for Competitive Bidding of Minor Minerals (henceforth the District Committee) Purba Bardhaman, pursuant to rules 38 and 41 of the west Bengal Minor Minerals Concession Rules, 2016 and the West Bengal Minor Minerals (Auction) Rules, 2016 (hereinafter auction rules) issued notice inviting tender dated 19/07/2017 to commence the e-auction process for grant of mining lease for sand in respect of sand block **BURDWAN-II/KALINAGAR/181(P),205(P)/F located in plot No.s 181(P),205(P) in Mouza- KALINAGAR J.L. No. 160, P.S. MADHABDIHI, District Purba Bardhaman over an area of 6.04 acres (2.44 hectares).** The e-auction process was conducted in accordance with the said Rules and also the tender document for the said sand block which was duly published in Government's eprocurement portal as per extant rules and **HIMANSHU SANTRA** has been declared as successful bidder under Rule 9 (8) of the said Auction Rules.

2. As required under Rule 10(1) of the said Auction Rules, **HIMANSHU SANTRA** has made payment of Rs. 900600/- (NINE LAKH SIX HUNDRED ONLY), through GRN: 19-201718-007656641-2 (SBI) dated 13.09.17,Rs. 1000000 (TEN LAKH) through GRN : 19-201718-010528180-2 (SBI) , dated-03.11.17, Rs. 600000(SIX LAKH) through GRN : 19-201819-026720825-2 (ICICI), dated-27.07.18 & Rs. 260000(TWO LAKH SIXTY THOUSAND) through GRN: 19-201819-027060840-2 along with EMD of Rs. 241800.00/- (TWO LAKH FOURTY ONE THOUSAND SIX HUNDREAD ONLY), through DRAFT NO: 005302 (CBC) dated 26/07/2017, towards one-third of the bid amount as first instalment.

Letter of Intent

Accordingly, pursuant to Rule 10 (3) of the said auction Rules, this letter of intent is hereby issued for grant of mining lease for sand in respect of sand block **BURDWAN-II/KALINAGAR/181(P),205(P)/F located in plot No.s 181(P),205(P) in Mouza- KALINAGAR J.L. No. 160, P.S. MADHABDIHI, District Purba Bardhaman over an area of 6.04 acres (2.44 hectares)** in favour of **HIMANSHU SANTRA** for a period of 5 (five) years subject to the following terms and conditions:

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Terms and Conditions

1. This letter of intent and subsequent grant of aforementioned mining lease shall be subject to the provisions of the MMDR Act, 1957, West Bengal Minor Minerals Concession Rules, 2016 and West Bengal Minor Minerals (Auction) Rules, 2016 as amended from time to time and **HIMANSHU SANTRA** shall be granted the mining lease only upon satisfactory completion of the requirements stipulated in the said Rules.

2. The balance amount of bid money shall be payable in three installments with a gap of maximum 45 days each from the date of 1st installment (Sub rule (2) of Rule 10 of auction rules).

3. HIMANSHU SANTRA (henceforth the successful bidder) shall furnish a Mining Plan along with Mine Closure Plan as per model format issued by the Commerce and Industries Department under letter No. 420-CI/O/MIN/GEN-MIS/16/2016(PT.) dated 28/07/2016, duly approved by the competent authority within one month from the date of issue of the Letter of Intent (LoI).

4. The successful bidder shall furnish Financial Assurance amounting Rs. 50000 (FIFTY THOUSAND ONLY) in any of the forms mentioned under Rule 18(2) of the West Bengal Minor Minerals Concession Rules, 2016 before execution of the deed of lease.

5. The successful bidder shall furnish performance security, being 10% of the bid amount in the form of bank guarantee before execution of the deed of lease mentioned under Rule 11 of the West Bengal Minor Minerals Auction Rules, 2016.

6. The successful bidder shall submit Environmental Clearance (E.C.) in respect of the above mentioned sand block duly issued by District Level Environment Impact Assessment Authority (DEIAA) or State Level Environment Impact Assessment Authority (SEIAA) or Ministry of Environment, Forests & Climate Change (MoEF&CC) as the case may be as per Environment Impact Assessment Notification 2006, as amended.

7. The successful bidder shall also obtain all other consents, approval, no-objections and the like as required under applicable laws for execution of deed of lease.

8. The successful bidder shall be bound to follow the guidelines stipulated in the Sustainable Sand Mining Management Guidelines, 2016 issued by the Ministry of Environment, Forest and Climate Change, Government of India for undertaking mining operation in the concerned sand block after registration of the duly executed mining lease.

9. The successful bidder have to furnish a Draft Mining Lease Deed in the format as specified in Form– D of the West Bengal Minor Minerals Concession Rules, 2016.

10. The Draft Mining Lease Deed should be prepared in durable papers neatly and sufficient space should be kept in between two lines in order to permit, if necessary, correction therein.

11. The Deed of Lease, after execution, shall be registered by the successful bidder at his own cost and no mining operation should be started before registration of the Deed.

12. The successful bidder shall have to incorporate all the conditions as mentioned in the West Bengal Minor Minerals Concession Rules, 2016 in the Draft Lease Deed.

13. The successful bidder shall have to comply with all the statutory requirements before presenting the Deed of Lease for execution before the appropriate authority.

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14. The successful bidder shall have to collect corner coordinate of mine block for preparation of mine plan from the office of the under signed.

This Letter of Intent (LoI) shall remain valid for a period of one month from the date of its issuance and if the successful bidder is unable to fulfil all the above conditions within this period he may submit an application addressed to the District Magistrate for extension of time. Such application may be submitted to this end for due processing. The District Magistrate being the Chairperson of the District Committee, reserves the right to extend the validity of Letter of Intent (LoI) for such reasonable period as it deemed fit.

Addl. District Magistrate
&
District Land & Land Reforms Officer
Purba Bardhaman

Memo No: 304/1287(1-4) /AUCTION 17/MM/18 Date: 26/11/ 2018

Copy forwarded for information to:
1. The District Magistrate & Collector, Purba Bardhaman, West Bengal
2. The Jt. Secretary to the Govt. of W.B., Department of Large Industries and Enterprises, 4 A.N. Tagore Sarani, Camac Street, Kolkata-700016
3. The Chief Mining Officer, Court Road, Asansol, Paschim Bardhaman.
4. The B.L. & L.R.O. Bardhaman - II.

Addl. District Magistrate
&
District Land & Land Reforms Officer
Purba Bardhaman

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ANNEXURE-"B" 183

GOVERNMENT OF WEST BENGAL
OFFICE OF THE DISTRICT LAND AND LAND REFORMS OFFICER
PURBA BARDHAMAN
PO- RAJBATI, BARDHAMAN, PIN CODE- 713104.
Phone No. 0342-2530647 Fax no. 0342-2533348/e-mail: dlrobardwan@gmail.com

Memo No 304/467/MM/2021 | Dated, Bardhaman the 08/06/2021

To,
Himanshu Santra,
Maniari, Eklakhi,
Bardhaman-713427

Sub: Extention of validity of LoI issued vide memo no. 304/1287/ Auction-17/MM /18, Dated- 26.11.2018.
Ref: His prayer dated 04.06.2021.

In reference to the above noted matter and in connection with his prayer mentioned above this is to inform him that after due consideration the validity of the previously issued LoI is herby extended for six months. The LoI shall remain valid for a period of six months from the date of issuance of this letter.

Therefore, he is requested to complete all the formalities including payment of government dues in this regard within the stipulated time frame.

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 0*3/2022 *KOLKATA*

Additional District Magistrate
And
District Land & Land Reforms Officer
Purba Bardhaman

Memo No. 304/467/1(4)/MM/2021 | **Dated, Bardhaman the** 08/06/2021

Copy to:
1) The Jt. Secretary to the Govt. of W.B. Department of Large Industries and Enterprises, 4 A.N. Clagey Sarani, Camac Street, Kolkata- 700 016
2) The Chief Mining Officer, Court Road, Asansol, Paschim Bardhaman.
3) The B.L & L. R. O., Bardhaman-II, Purba Bardhaman.
4) The C.A to the District Magistrate, Purba Bardhaman for kind appraisal of the District Magistrate, Purba Bardhaman.

Additional District Magistrate
And
District Land & Land Reforms Officer
Purba Bardhaman

ANNEXURE - "C"

MINE PLAN & PROGRESSIVE MINE CLOSURE PLAN FOR KALINAGAR SAND MINE ON DAMODARRIVER

FOR THE PERIOD OF (5 YEARS)
LOCATED AT MOUZA: KALINAGAR, RIVER-DAMODAR
AUCTION ID: 2017_DMBUW_676
VILLAGE / MOUZA- KALINAGAR, JL NO.-160, PLOT NO- 181(P),205(P)
SAND BLOCK NO: BURDWAN-II/KALINAGAR/181(P),205(P)/F
AREA – 6.04 ACRES(2.44 HA) in Non Forest Area
BLOCK- BURDWAN SADAR-II, P.S.- MADHABDIHI,DIST-PURBA BARDHAMAN

CATEGORY – "B2" (MINOR MINERAL)

APPLICANT-
HIMANSHU SANTRA
MANIARI,EKLAKI,
BARDHAMAN PIN-713427,W.B.

Prepared By:- Arun K. Das
Consultant Mining Engineer
(RQP/KOL/353/2008)

On behalf of :-Ray Technic Solutions
Bhatura, Rajbal, Hooghly, W.B.-712123
861/261563//98082957

Arun K. Das;B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

Office of the Chief Mining Officer
Govt. of West Bengal

APPROVED
Joydeb Das
27/10/2021
(Joydeb Das)
Chief Mining Officer
Govt. of West Bengal.

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ENCLOSURE I

CONSENT LETTER

The Mining Plan in respect of **Kalinagar Sand Mining Project (Minor Mineral),** over an area of **6.04 Acres / 2.44 Hectares** on **river Damodar** at **Mouza-Kalinagar, P.S.-Madhabdihi, Dist. - Purba Bardhaman, West Bengal**, over **Plot No.-181(P), 205(P); J.L. No.-160** under MMDR Act-1957 & WBMMCR 2016 has been prepared by **Shri Arun Kumar Das, RQP/KOL/353/2008/A.**

This is to request the Director, Directorate of Mines and Minerals (DMM), Calcutta, W.B. to make any further correspondence regarding any correction of the Mining Plan with the said recognized person at his address below.

Shri Arun Kumar Das

RQP No. : RQP/KOL/353/2008/A

Address : Flat – 3/B, AVA Mansion
Apear Garden (E), Asansol – 4 (WB)

We hereby undertake that all the modifications/updating as made in the said Mining Plan by the said recognized person be deemed to have been made with our knowledge and consent and shall be acceptable on us and binding in all respects.

Place :

Date :

Signature of the Applicant
Himanshu Santra

Arun K. Das;B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

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Acknowledgement Slip for EC Application

This is to acknowledge that the proposal has been successfully uploaded on the portal of the Ministry. The proposal shall be examined in the Ministry to ensure that required information has been submitted. An email will be sent seeking additional information , if any, within 20 working days. Once verified, an acceptance letter shall be issued to the propject proponent .

Following should be mentioned in further correspondence

1. Proposal No.	: SIA/WB/MIN/238304/2021
2. Category of the Proposal	: Non-Coal Mining
3. Name of the proposal	: Kalinagar Sand Mine, Himanshu Santra
4. Date of Receipt of Proposal	: 15 Nov 2021
5. Name of the Project proponent along with contact details	
a) Name of the proponent	: HIMANSHU SANTRA, KALINAGAR SAND MINE
b) State	: West Bengal
c) District	: Purba Burdwan
d) Pincode	: 713427

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GOVERNMENT OF WEST BENGAL
Office of the Chief Mining Officer
COURT ROAD, ASANSOL-713304,
DISTT. – PASCHIM BARDHAMAN

Tele Fax: 0341-2252407
e-mail : cmo.dmm-wb@nic.in

Memo. No. 290/CMO/Sand/EBdn/S/501 Dated:- Asansol the 27th October, 2021.

To
Sri Himanshu Santra,
Maniari, Eklakhi, Bardhaman,
Dist. Purba Bardhaman,
West Bengal, PIN 713427.

Subject- **Approval of "Mining Plan" for mining of River-bed Sand' (Mineral) in respect of Sand Block, bearing I.D. Burdwan-II/Kalinagar/181(P), 205(P)/F, in Mouza Kalinagar, over Plot No.s 181(P), 205(P), J.L. No. 160, under P.S. Madhabdihi, in Distt. Purba Bardhaman, over an Area of 6.04 Acres (2.44 Hectares), allotted to Himanshu Santra.**

Ref.- **DL & LRO's office Memo. No. 728/MM/2021, dated 28.09.2021.**

Sir,

In terms of Sub rule 2(b) under Rule 4 of the West Bengal Minor Minerals Concession Rules, 2016, I hereby approve the above mentioned **"Mining Plan"** of **Burdwan-II/Kalinagar/181(P), 205(P)/F, Sand Block.**

01. This **"Mining Plan"** is approved without prejudice in any other laws applicable to the Mine from time to time whether made by Central Govt., State Govt. or any other authority and the **"Mining Plan"** is approved without prejudice to any order or direction from any court of competent jurisdiction.

02. It is also clarified that the approval of your aforesaid **"Mining Plan"** does not in any way imply the approval of the Govt. in terms of any other provisions of Mines & Minerals (Development & Regulation) Act, 1957 and West Bengal Minor Minerals Concession Rules, 2016, framed thereunder and any other laws.

03. It is also clarified that this approval of **"Mining Plan"** under West Bengal Minor Mineral Concession Rules, 2016 is subject to the provision of Sustainable Sand Mining Management Guidelines, 2016, Enforcement & Monitoring guidelines for Sand Mining, 2020 and other relevant statutes, orders including those issued by Hon'ble Courts of Law (including National Green Tribunal) as may be applicable to the project area from time to time.

04. It is further clarified that approval of the aforesaid **"Mining Plan"** is subject to the provisions of the Environment Impact Assessment Notification, 2006 as amended.

05. The approved **"Mining Plan"** is valid for entire duration of lease period.

06. A copy of Environmental Clearance shall be submitted to this office when the same will be issued by the **State Level Environment Impact Assessment Authority (SEIAA), West Bengal.**

Yours faithfully,

(Signature)

Chief Mining Officer
Govt. of West Bengal

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 083/2022 KOLKATA

Memo. No. 290/CMO/1/Sand/EBdn/S/501 Dated:- Asansol the 27th October, 2021.

Copy forwarded for information & necessary action to:

1. The ADM (LR) & DL & LRO, Purba Bardhaman.
2. Sri Arun Kumar Das (RQP).

Chief Mining Officer
Govt. of West Bengal

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ENCLOSURE II

CONSENT LETTER

"The provisions of Mines Act, Rules and Regulations made there under have been observed in the Mine Plan, over an area of **6.04 Acres / 2.44 Hectares in Purba Bardhaman district** of West Bengal state belonging to **Kalinagar Sand Mining Project (Minor Mineral)**, and where specific permissions are required, the applicant will approach the D.G.M.S. Further, standards prescribed by D.G.M.S. in respect of mines' health will be strictly implemented".

Place :

Date :

Signature of the Applicant
Himanshu Santra

Arun K. Das; B.E., F.C.C., M.I.M.
R.Q.P./KOL/353/2008/A

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ENCLOSURE III

CERTIFICATE FROM RQP

The provisions of the West Bengal Minor Mineral Rules, 2016, have been observed in the preparation of the Mine Plan for **a Sand Mining Project (Minor Mineral)**, over an area of **6.04 Acres / 2.44 Hectares** on **river Damodar** at **Mouza – Kalinagar, P.S.-Madhabdihi, Dist. – Purba Bardhaman,** West Bengal, over **Plot No.-181(P),205(P); J.L. No.-160** and whenever specific permissions are required, the applicant will approach the concerned authorities of **Directorate of Mines and Minerals (DMM), Calcutta**.

The information furnished in the Mine Plan is true and correct to the best of our knowledge.

Place :

Date :

Shri Arun Kumar Das

(Name of Recognised Person)

Reg. No. RQP/KOL/353/2008/A

Arun K. Das;B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
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GENERAL

INTODUCTION

Applicant **Himanshu Santra** is the successful highest bidder of Sand Block No.: **BURDWAN-II/KALINAGAR/181(P),205(P)/F** after participating in sand block auction conducted by Government of West Bengal and will obtain sand mining lease after deed registration. The mining lease will be granted over an areas of **6.04 Acres / 2.44 Hectares** on **river Damodar** at **Mouza – Kalinagar, P.S-Madhabdihi, Dist. – Purba Bardhaman**, West Bengal, over **Plot No-181 (P),205(P)**; J.L. No. – 160.

The Mining Lease will be granted for a period of 5 years from the date of deed registration.

While preparing the mining plan proper attention has been paid to ensure that the relevant provisions under MMDR Act-1957 & WBMMC R 2016 are followed.

In order to process further by the concern Department, 8.60 an environment clearance from competent Authority is necessary. For the grant of environment clearance, mining plan is also a component. For this reason the Applicant has given task of Preparation of Mining Plan to **Arun Kumar Das (RQP/KOL/353/2008/A).**

1. GENERAL INFORMATION ABOUT THE APPLICANT

1.a. Name & Address

Name:	**Himanshu Santra**
Authorized signatory:	**Himanshu Santra**
Address:	*MANIARI,EKLAKHI,*
	BARDHAMAN- 713427

1.b. STATUS OF THE APPLICANT

The Applicant is a Private Individual

Arun K. Das;B.E.,F.C.C.H.I.M.
R.Q.P./KOL/353/2008/A

PRAMITA PAL GOVT. OF WEST BENGAL
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2. GENERAL INFORMATION ABOUT THE MINING LEASE

2.a. MINERAL(S) THAT THE APPLICANT INTENDS TO MINE

Mineral(s) ---River bed sand

2.b. DETAILS OF THE MINING LEASE

Table 2-1: Details of the lease area

Lease Period	5 years from the date of Registration		
Description of the area	Project area 6.04 Acres / 2.44 Hectares on river Damodar at Mouza – Kalinagar, P.S-Madhabdihi, Dist. – Purba Bardhaman, West Bengal, over Plot No.- 181 (P),205(P); J.L. No 160. Sand Block Code: BURDWAN-II/KALINAGAR/181(P),205(P)/F		
LOCATION (CO-ORDINATES)	BOUNDARY PILLAR NO.	Latitude	Longitude
	A	23°10'17.06"N	87°57'11.56"E
	B	23°10'17.05"N	87°57'16.93"E
	C	23°10'21.84"N	87°57'18.06"E
	D	23°10'21.74"N	87°57'11.91"E
River Name	Damodar		

*Central Point of the Block is 23°10'19.279"N 87°57'14.556"E which is provided by the Concerned DL&LRO office.

* Location (coordinate) by exploration agency with survey team

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3. PARTICULARS OF THE RQP

NAME OF THE RQP AND ADDRESS

Shri Arun Kumar Das

RQP No. : RQP/KOL/353/2008/A

Address : Flat – 3/B, AVA Mansion
Apear Garden (E), Asansol – 4 (WB)

NAME OF THE PROSPECTING AGENCY

Ray Techno Solutions Consultancy Services

Address : Vill. – Bhatua,
P.O. – Rajhat
P.S. – Polba
Hooghly – 712123

Phone : 8617261563 / 7980812957

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4. LOCATION & ACCESSIBILITY OF THE AREA

LOCATION & ACCESSIBILITY

Kalinagar Sand Mine block is situated about 5 km away from NH-2 and Borshul road about 1Km,. Nearest railway station is **Bardhaman Station** which is about **18-20 Km** and **Shaktigarh Railway Station** which is about **6 km** away from the mine site. Nearest Airport is **Netaji Subhash Chandra Bose International Airport and Andal Airport which is about 95 km and 75-80 km from the mine site.**

DETAIL GEOGRAPHY OF THE AREA (TOPOSHEET NO. WITH LATITUDE AND LONGITUDE)

The project area falls under Survey of India **Toposheet No.F45D16 (73M/16)**. The Latitude & Longitude is given in **Table 4.1**. The land ownership pattern is given in **Table 4.2.**

Table 4-1: Location Details

Aspects	BOUNDARY PILLAR NO.	Latitude	Longitude
LOCATION (CO-ORDINATES)	A	23°10'17.06"N	87°57'11.56"E
	B	23°10'17.05"N	87°57'16.93"E
	C	23°10'21.84"N	87°57'18.06"E
	D	23°10'21.74"N	87°57'11.91"E
River Name	Damodar		

*Central Point of the Block is 23°10'19.279"N /87°57'14.556"E which is provided by the Concerned DL&LRO office.

Table 4-2: Land ownership Pattern

Summary	Area (in Ha)
Government Land	2.44

LOCATION MAP

Key Plan showing the location of the area over Survey of India **Toposheet No. F45D16 (73M/16)** on scale 1:50,000 is given in **Plate No. 2**

LEASE AREA PLAN

Project area or Khasra Plan, on a scale of 1:3960 or 16" = 1 mile forming a part of cadastral plan, showing the Lease hold area and the plots of land located therein is given in **Plate No.1.**

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5. PHYSIOGRAPHY, DRAINAGE & CLIMATE

PHYSIOGRAPHY

The Project area falls under the Latitude & Longitude as given in **Table 5.1**.

Table 5-1: Co-ordinates of the Project site

Aspects	BOUNDARY PILLAR NO.	Latitude	Longitude
LOCATION (CO-ORDINATES)	A	23°10'17.06"N	87°57'11.56"E
	B	23°10'17.05"N	87°57'16.93"E
	C	23°10'21.84"N	87°57'18.06"E
	D	23°10'21.74"N	87°57'11.91"E
River Name	Damodar		

*Central Point of the Block is 23°10'19.279"N 87°57'14.556"E which is provided by the Concerned DL&LRO office.

The Damodar River flows from the north-west to south-east direction. The flow rate of the river varies with the quantity of precipitation in the catchment area. A major portion of the precipitation occurs during the monsoon season i.e. from June 15 to September 15 every year.

DRAINAGE

No drainage system / nallah are meeting the riverbed. Hence no precaution is require to protect.

CLIMATE

The district experiences a climate which is transitional between CWg and AW types, where 'C' stands for 'warm temperate rainy climates with mild winter', 'W' for 'dry winter not compensated by total rain in the rest of the year', 'g' for 'eastern Ganges type of temperature trend' and 'AW' for 'tropical savanna climates'.

Average temperature in hot season is 45°C while at the cold season is 5°C. Average rainfall is 1495 mm. The cold season starts from about the middle of November and continues till the end of February. March to May is dry summer intervened by tropical cyclones and storms. June to September is wet summer while October and November is autumn.

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6. GEOLOGY OF THE AREA

6.a. REGIONAL GEOLOGY

The Geology of the region has been studied mainly by the G.S.I. whereas the State Directorate and others have carried out geological mapping in only selected parts. Geologically, the area consists of the metasedimentary rocks of the Precambrian age, Gondwana sedimentary rocks, Rajmahal Basalts and Upper Tertiary sediments. The tentative stratigraphic succession of the region has been suggested as follows:

Table 6-1: Stratigraphic Succession of the Region

Division	Group	Formation	Lithology
Upper Gondwana	Jabbalpur	Umia	Sandstone, Shale
		Jabbalpur	Claystone, Sandstone
		Chaugaon	Claystone, Sandstone
	Rajmahal	Kota	Sandstone, Grits, Coal Bands
		Rajmahal	Basaltic Lava flows
	Mahadev	Maleri	Red Sandstone, Claystone
		Panchmari	Brown Sandstone, Shales
---------- Unconformity ----------			
Lower Gondwana	Panchet	Panchet	Brown Sandstone, Shales
		Raniganj	Sandstone, Shale, Coal Seam
		Barren Measures	Sandstone, Ironstone Shale
		Barakar	Sandstone, Shale, Coal Seam
		Karharbari	Sandstone, Grits, Coal Seam
	Talchir	Rikba	Sandstones
		Talchir	Greenish Shale
		Boulder Bed	Boulder Bed

6.b. LOCAL GEOLOGY

The local geology of Purba -Bardhaman district is a flat alluvial plain, that can be divided in to four prominent topographical regions. On the north the Kanksa Ketugram Plain lies along the Ajay, with joins the Bhagirathi. The Bardhaman Plain occupies the central area of the district, with the Damodar on the south and the south-east. On the southern part is the Khandaghosh plain. The Bhagirathi flows along the eastern boundary of the district, and the Bhagirathi basin occupies the eastern part of the district. The undulating laterite topography of Paschim Bardhaman district extends up to Ausgram area of this district.

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6.c. REPLENISHMENT STUDY

6.c.(i). Origin and control of Mineralization:-River generally gets its full shape and water flow fed by smaller tributaries which are geo-morphologically termed as catchment area. The river Damodar has got its water source in the catchment zone of Chotonagpur Plateau which is made up of different hills and hillocks composed of varying rocks.

The rocks in the catchment zone gets weathered, decomposed by natural agencies like air and rainfalls. With prolonged process of weathering and decomposition these rocks become fragmented and broken which ultimately moves with water in the tributaries to the mother river. This mineralization in river depends upon the prescription rates i.e; increase in rainfall increases the carrying of mineralization. As our proposed mining site is located at Mouza-Kalinagar, P.S-Madhabdihi Dist-Purba-Bardhaman so we will discuss about the origin and control of mineralization of the said river.

The mineralization in river depends upon the precipitation rates, i.e; increase in rainfall increases the carrying of mineralization. We know that the river bed sand replenished every year with the sand carried out with flow of water in monsoon and there is no such control of mineralization as it depends on the nature of flow of river water. After Dishergarh, the Damodar river enters flat alluvial plains and runs eastward up to Barsal in Bardhaman and the flow of the river becomes very sluggish at this stage. In this portion Damodar receives its last tributary, the Sali from the south and after wards the Damodar river takes a sharp turn towards south near the village Chachai, 24 Km South east of Bardhaman .

Within its elbow shaped area several spill channels are found to carry surplus water of the Damodar during monsoon months. After traversing some area the river turns towards south and its distributory named the Kana Damodar, which ultimately drains out water in the Hooghly. Traversing further towards South Damodar splits into two important channels, the Mundeswari and the Damodar. At present 75% of the runoff from the Damodar river is carried by the river Mundeswari through the Begor and Mushir Hanas and drain out water in the Rupnarayan. This cahnnel cannot carry the total discharge of flood of Damodar and as a result the elbow area of the Damodar gets inundated occasionally notwithstanding the construction of the barrage and dams over the Damodar in its upstream characteristics (hydraulic geometry and stream flow) of the proposed site based on discharge measurements and statistical values determine the total sediment load. Hydraulic geometry deals with variation in channel characteristics in relation to variation in discharge. Mainly two sets of variation take place, i.e; variations at a particular cross section and variations along the length of the stream (downstream variations.) Stream flow characteristics include annual instantaneous peak discharges, which means maximum and minimum daily discharges and flow duration.

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6.c.(ii). DEPOSITION OF MINERALS IN RIVER BED

When the sediment transporting capacity of river at a particular point become less than sediment load being carried, as a result of reduction, the velocity due to increase in cross section or reduction in slope of the river, the excess sediment get deposited on the river bed. Here the functionality of Damodar fluvial system is controlled by dams, barrage, weirs, sluices, embankments and canals, maintaining a dynamic and anthropogenic processes. Due to dams, alteration of the flow regime, channel characteristics and the sediment supply of the river is changes year to year. The low volume of the water released downstream during dry months virtually transform river into sandy waste whereas the high discharge released during monsoon months convert to vigorous flowing channel which results in shifting of channel. Although some sediment is trapped in the reservoirs, a million of sediment nevertheless pours into the river from the uncontrolled stretch. Embankments constrict the active floodplain in lower Damodar river basin and compel the river decapitate its energy within the narrow sandy bed.

We know that deposition of minerals in river bed of any river depends on its dams, barrage, weir, sluices, embankments, canals etc, such as our proposed site, deposition of minerals depends on the load management system of Damodar river Basin. Deposition of sand is generally found on the opposite bank of the flowing channel of the rivers.

6.c(iii) GEO-MORPHOLOGY

When increase or decrease of predominant flow and also for the sediment load of a river, there is a change in riverbed level, the changes in river bed channel depth caused by aggradations or degradation of riverbed can be simulated. When attempting to model a natural system like fluvial morphology there is a significant limitation because channel cross section usually change with time and adjustment of both width and depth are quite common. River with adjustments may occur due to wide range of morphological changes and channel responses, showing meandering (Convex/Concave) and the land shape which depends upon the character of land mass.

From the point of origin the river Damoder has been travelling through the rocky terrain which have been in topographically controlled zone with signs of remote structural controls like lineament and alteration of rock layering's. Using it's province of topographical control. Several dams have been constructed for irrigation purpose (Engineering geologists use to study these topography, composition and structure of rocks in selecting dams.).With the increasing precipitation rate/rate of discharge the fluvial energy increases with ultimate increase in carrying capacity. Generally at the meandering part (Convex/Concave) the fluvial energy becomes lesser showing deposition of sand sized Minerals.

At the old stage of river its lower energy level manifests in carrying silt or clay sized minerals in the plain to very less topographic controlled zone. It originates as a canal from Srirampur, a village in Madhabdihi at P.S Raina-I. Mundeswari river is a small river which causes floods in Hooghly, Purba Midnapur and Howrah districts during monsoons. Durgapur Barrage has been constructed to control the stream flow to restrict the flood regime and irrigation.

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6.c.(iv). CLIMATIC ZONE, RAIN FALL, DRAINAGE PATTERN, ETC.:-

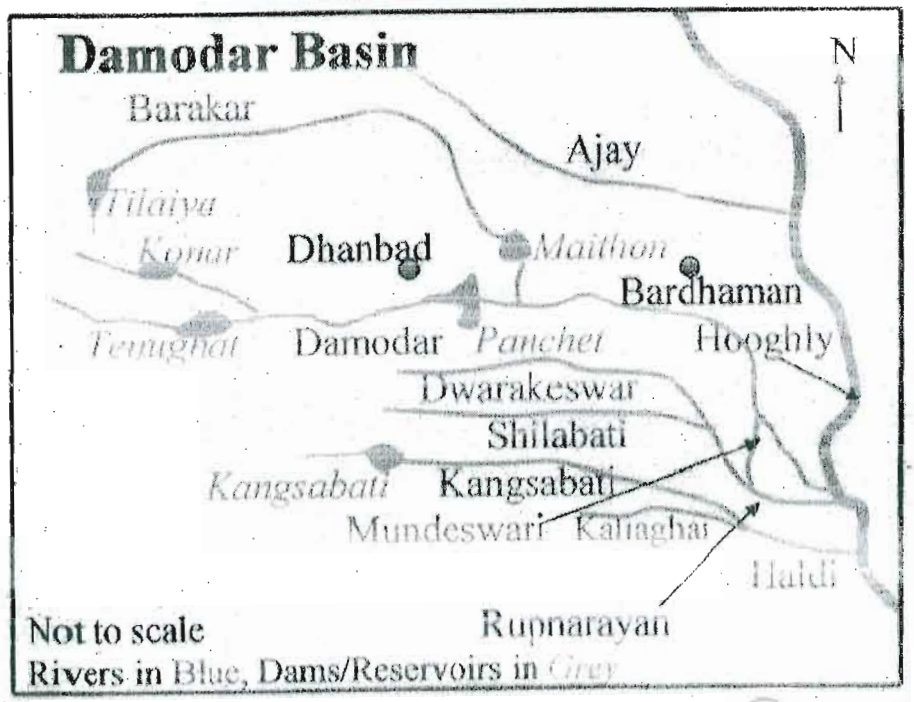
The Damodar is referred to as a tropical river as it flows through a tropical environment. The tropicality of environment is primarily a product of thermal criteria. The climate of the Damodar area is characterized by very mild winters and hot wet summers. Like the rest of the country, the Damodar basin area experiences two principal seasons. In winter, surface air flows in north-easterly direction, which is continental in origin and with low humidity and the season is known as north-east winter monsoon. During the summer months of June to September, the general flow of winds is from the sea to the land containing much humidity with cloud and rain, the direction of wind is south-westerly and the season is known as south-west Monsoon. Besides there are transitional seasons of hot weather month of April, May and retreating monsoon months of October and November. The month of May is the peak of summer season with an average maximum temperature of 43 degree Celsius and minimum of 30 degree celsius. The average annual temperature is 26.3 degree Celsius. The temperature during the winter season fall below 4 degree at some locations in the Damodar river Basin.

The seasonal rainfall occurs due to the South-Western monsoon every year and floods occur depending on the intensity of the storms. Over the basin, the annual rainfall varies between 765 and 1607 mm with an average of 1200 mm of which 80 % occurs during the monsoon season. The average annual rainfall in the three sub-catchments namely Barakar, Damodar and lower basin are approximately 1200 mm, 1250mm and 1400 mm, respectively. The rainfall is the highest in the southern part and decreases gradually towards the northern part of the Barakar catchment. Rainfall due to squalls in upper basin are not uncommon during summer season. The evaporation is maximum during the summer season (21mm) and minimum in monsoon season(2.5 mm).The Damodar is seasonal and flood prone mainly on account of reasons, which are physiographic and meterological in nature. Floods ravage the lower valley area, which is not only very fertile owing to its alluvial plain suitable for irrigation and agriculture but also used for various industrial activities. Meager rainfall due to conventional thunderstorms occurs in the months of April and May. The rainfall during winter occurs occasionally associated with western disturbances.

The core drainage system of the Damodar river basin contructed by the Damodar river and its principal tributary, the river Barakar, that drains about 23,370.98 sq. km. area of Jharkhand and West Bengal states. In its upper reaches the Damodar is known as the Deonad, and originates in Khamarpet hill range (1,062 m) near Chandwa in Palamau district and drains into a fan shaped catchment area of about 25,820 sq km. The waters of the Deonad traverse through the steep slope of the pat region to descend on the gneissic flat plain of Chandwa basin and the sluggish flow of the river over the flat top surface, which later on got dissected into tabular blocks by fluvial action. The river Damodar enters the Gondwana Basin after the confluence of the Dharamauti near Mahuamilan, and the topography around the river changes. The gradient of the stream becomes steeper and waterfalls abound the course traverses through the hilly region and woody country carved out of hard sandstone and grit of the Gondwana age. In this section, the Damodar receives a number of tributaries both from the southern and the northern slopes.

The southern tributaries like Chati, Saphi, Batuka, Dainkata, Nalkari and Dhobdhab and flow over the granite-gneissic surface of Ranchi plateau, while the northern tributaries are Haharo (W), Bakri-Garhi, Haharo (E) and Marmarhar originate from the Hazaribagh plateau and flow for considerable distance over the Archaean gneiss before entering the Gondwana basin. The Konar and Bokaro streams originate in the Hazaribagh plateau near Hazaribagh town flows over the Archaean gneiss country while Bokaro traverses through the Archaean gneiss country for some distance and finally enters the Gondwana basin near Bokaro coalfields. The combined courses of the Konar and Bokaro rivers meet the Damodar near Tenughat. The Damodar flows eastward from Tenughat and receives a few other tributaries from the north and south before reaching Panchet. From the north the Jamunia and the Khudia join the Damodar after flowing over the Jharia coalfields, while from the south Ijri and the Gowai meander eastward to meet the Damodar near the western end of Panchet hill reservoir. After traverse some area the river turning towards south and it has a distributary named the Kana Damodar, which ultimately drains out water in the Hooghly.

Traversing further towards south Damodar splits into two important channels, the Mundeswari and the Damodar. After Burdwan subdivision the Damodar river flows over the Arambagh sub-division of Hooghly district and Uluberia subdivision of Howrah district to meet the Hooghly opposite Falta. At present 75% of the runoff from the Damodar river is carried by the river Mundeswari through the Begor and the Mushir hanas and drains out water in the Rupnarayan. **The drainage pattern of Damodar Basin will be maplyclear from the following picture.**



10 Drainage Pattern of Damodar Basin

6.c.(v) SEDIMENTATION STUDY:-

The moving water over the land surface is dominant agent of land space alteration. Near surface weathering provide sediment load for the flowing streams. Some of the load gets deposited along the path of the river and only the rivers to the sea carry a fraction of total waste material from the lands. In fact, the land shape evolve essentially due to the water flowing over it in small streams, which combine to form rivers. The process of these water courses eroding and cornering water is a continuous process and has been going on since the formulation of this planet and the elements surrounding it. Though rivers are ever changing but in a man's lifetime it may not be much depending on the land space through which it passes. Sediment transport is essentially a two-phase flow in which the fluid phase is air or water and the solid phase is sediment particle. The process of erosion, transport and deposition of sediment, collectively termed as sedimentation, are natural process and have been occurring throughout mainly through rolling, sliding or saltation (bouncing against the riverbed). Finer particles (with low velocities) are entrained in suspension by the fluid turbulence and transported along the channel in suspension. This mode of transport is called suspended load. Sometimes particles from upland catchment comprise of the finest suspended sediment (typically less than 0.00195mm in diameter) called 'Wash Load', are also transported in suspension. These particles remain in permanent suspension as they are small enough to bounce with water molecules and stay afloat. The combined bed material and wash load is called "total load" .Bed load consists mostly of particles in the size category of 0.1mm in diameter. Particles with diameter less than 0.1mm are likely to be classified as suspended material. Sand particles range in diameter from 0.0625 mm to 2.0 mm. Sand mostly is transported as bed load. Sand consists of small grains or particles of minerals and rock fragments. Although these grains may be of any mineral composition the dominant components of sand is the mineral quartz, which is composed of silica (silicon di-oxide) found in inland continental setting and non-tropical coastal setting. Quartz is particularly prevented as it is extremely resistant to physical and chemical breakdown by the weathering process.

Our project site is over Damodar riverbed and is covered with considerable volume of sand up to depths of 4-5m from riverbed surface. The nearest barrage from the project site is approximately 74.8 km. A thin water stream was observed which is a part of the river channel and is passing near by the west bank of the river. This water stream during monsoon season is fed with excess discharge from Durgapur barrage thus flooding the entire Damodar river channel and causes sedimentation/replenishment of sand in the excavated pits created due to mining. This however, during the cusp of the monsoon season, the maximum amount of sand, which was excavated is replenished naturally. So, almost 100% of the sand is replenished every year.

The mining shall be adopted to facilitate the sedimentation of the excavated pits. The mining is suggested on cyclic basis in such a way that pit of previous year mining will act as depository for the monsoon season. Sand will be extracted from the pit lot during one year.100% excavated quantity of the same are automatically replenished by rainfall in the monsoon by the river itself on account of its flow and velocity.

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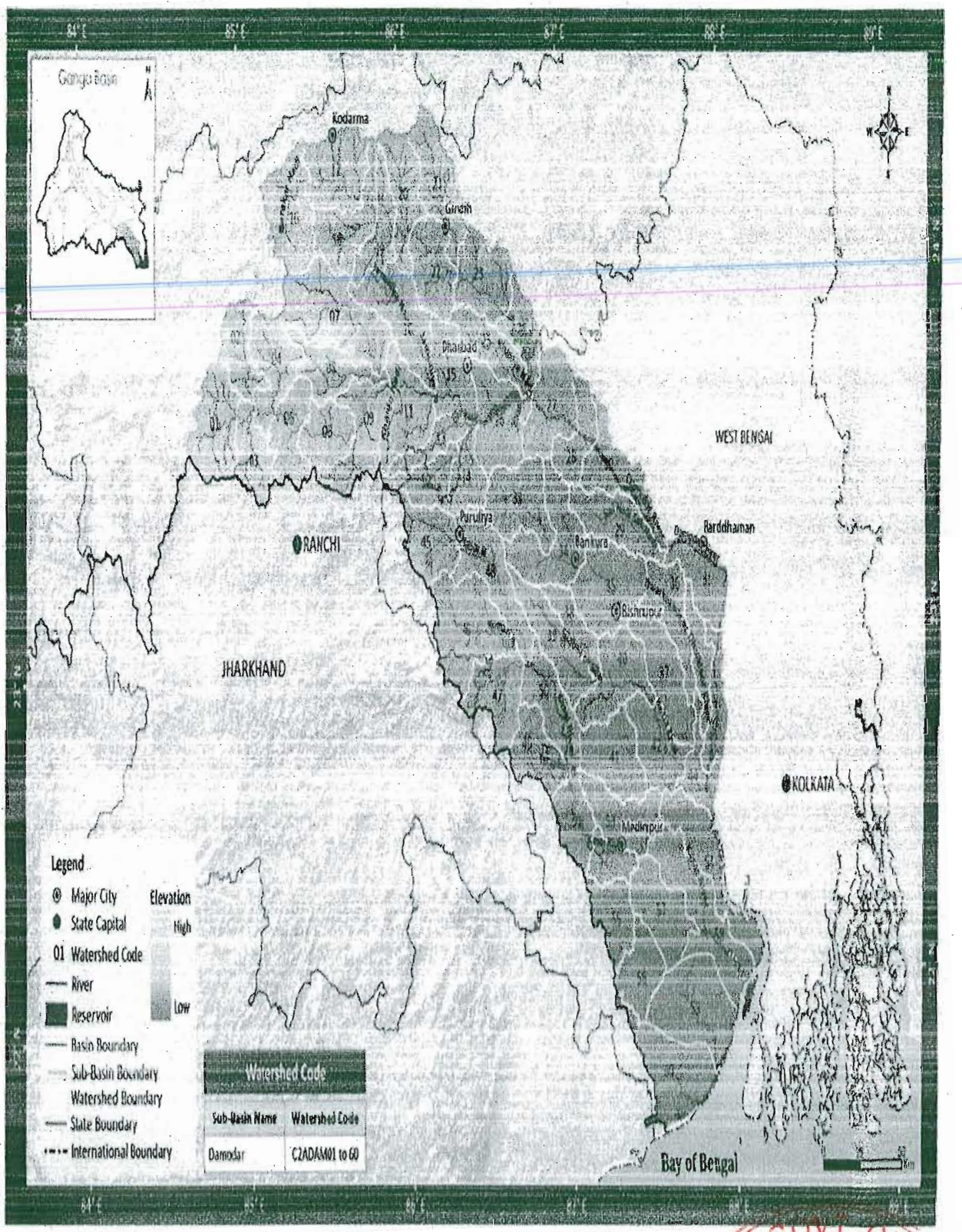

WRIS MAP OF DAMODAR BASIN

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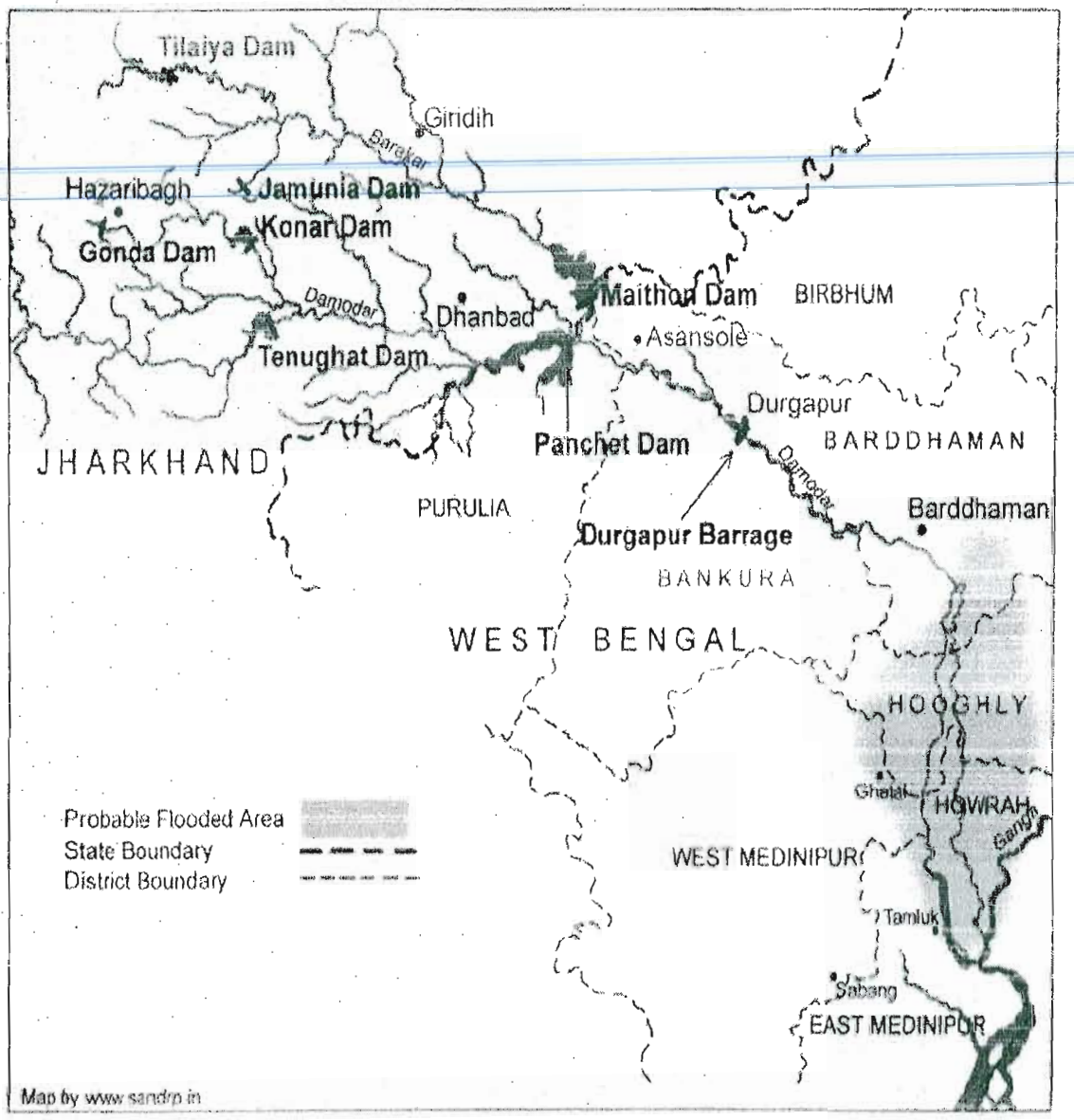
From the following map we can get a brief idea about the nearby Dams from the mining site



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6.d. Estimation of Geological Reserve and Grade.

METHOD OF ESTIMATION OF RESERVES: The total area for applied lease is **2.44 ha.** The sand gets deposited every monsoon due to wash load and bed load and must be removed from time to time to avoid flooding of shore. Sand is available in the middle portion of the riverbed as well as near the riverbank. It is permitted to remove sand only up to 3m depths or up to ground water level, whichever is less. After making trench in the riverbed, it could be observed that up to 3m depths at the lease area in the river, no water level could be encountered. Hence, sand up to 3m depths can be mined. The estimation of the reserves has been drawn on the basis of the area under lease. The Lease Area in ha multiplied by 10000 will give the area in m^2. The ultimate depth of sand mining in this case is 3m. Hence the area in m^2 multiplied by the thickness will give the volume of the geological reserve. The details are given below with reference of Geological plan.

MINEABLE RESERVES: The total reserves as estimated within the leasehold area at present approximately 73220 m^3 and sand will be replenished every year after monsoon. The mineable reserves will be realized after keeping 100m distance from the river bank or $1/3^{rd}$ of the distance between the bank lines, whichever is less in order to protect the river banks. The distance between the proposed mining area and the river bank is more than 100m, which is at par with the Enforcement and Monitoring Guidelines for Sand Mining, 2020. After leaving 7.5m barrier zone, 1.97 ha area are left for mining which gives a mineable reserve of 59100 m^3. The mining will be done only up to a maximum depth of 3m. Table 6.2 gives the geological reserve and mineable reserve.

Table 6-2: Measured Mineral Reserve

Area (ha)	Area (m^2)	Avg. Thickness in m	Geological reserve in m^3	Mineable reserve in m^3
2.44	24400	3	73220	59100

ANTICIPATED LIFE OF THE MINE: The reserve estimated above will replenish every year. So, the life of the mine will be for the entire lease period.

FEASIBILITY STUDY BASED ON THE GEOGRAPHICAL CONDITIONS AND OPERATING CONDITIONS:

INFRASTRUCTURE: Road is present near the working site. Manpower is cheaply available.

GEOLOGY : Geologically the area is potential and the deposit is sufficient for fulfillment of the requirement.

LEGAL MATTERS : Leasehold area is valid as per the rule of WBMMC Rule 2016. There will be no displacement. Land is Government land.

OPERATING : The Applicant has all the mining equipment's used for the scientific Manual mining. The mining is eco-friendly.

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Production & Development Planning pertaining to the Enforcement and Monitoring Guidelines for Sand Mining, 2020:-

i) **Pre-monsoon:-** At the time of Pre-monsoon, the Production/Excavation of sand is done at full-fledged. This part of the Production and development planning is explained in the Production & Development Plan **(Plate No.8)** of the Proposed Mining Plan.

ii) **Monsoon:** During the monsoon the river bed is filled with water and the entire mining activity is stopped as per the mining rules. The entire replenishment occurs at this point of time, resulting to NIL Production and Development planning, which is explained in the Lease Hold Plan **(Plate No-4)** of this Proposed Mining Plan.

iii) **Post Monsoon-** By Post Monsoon the excavated sand is replenished. Production and Development Planning Post Monsoon is explained in the Geological Plan **(Plate No-6)** of this Proposed Mining Plan.

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7. METHOD OF MINING

7.a. CATEGORY OF MINING

Total area of the mine is **6.04 Acres / 2.44 Hectares**. So according to MOEF&CC notification, it is B2 categories project.

7.b. YEAR WISE DEVELOPMENT

No development work is required as the mining is for riverbed sand. Excavation of river sand will be done manually and transportation by front end loaders. It has been proposed to collect approximately 59100 m^3/year. The riverbed material will be replenished during the monsoon every year.

YEAR WISE PRODUCTION

Sand will be lifted from the riverbed for all the eight months except the monsoon period from June to September. Proposed production for next five years is given in **Table** 7.1.

Table 7-1: Production Details

Year	Geological reserve in m^3	Production in m^3	Balance Deposit in m^3	Replenishment in m^3
1st	73200	59100	14100	59100
2nd	73200	59100	14100	59100
3rd	73200	59100	14100	59100
4th	73200	59100	14100	59100
5th	73200	59100	14100	59100

PROPOSED RATE OF PRODUCTION WHEN THE MINE IS FULLY DEVELOPMENT: Proposed rate of production will be 59100 **m^3/year** at the stage of fully development of mine. As we know the density of **Wet Sand** is 2.082**MT/ m^3** therefore the maximum quantity of Sand Produced in this proposed plan is 1,18,200MT(**Wet Sand**).So the maximum quantity of the sand production is 48,442 **MT/ha/annum,** which is very much within the four corners of the **Enforcement and Monitoring** for Sand Mining Guidelines, 2020.

MINEABLE RESERVES AND ANTICIPATED LIFE OF THE MINE: 59100 m^3/year is the quantity of reserve estimated as mineable reserves and river sand will be **replenished every year after monsoon**. As such the life of the mine will continue till the period of lease and subsequent lease renewals.

7.c Extraction method:-Opencast Manual Mining method will be adopted for this mining operation.

METHOD FOR DEVELOPING AND WORKING THE DEPOSITS

The sand deposited, as riverbed material will be collected in its existing form manually.

Arun K. Das,B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

APPROVED

(Joydeb Das)
Chief Mining Officer
Govt. of West Bengal

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 063/2022 KOLKATA

METHOD OF MINING: The mining is confined to collection of sand from the riverbed. The operation will be manually with the help of spade; hands shovel in which the riverbed material will be collected in its existing form. Sand Mining will be carried out only up to a depth of 3m at riverbank and in water it could not be measured. Hand tools like shovel, pan, sieve etc. will be used. Mining will be carried out only during the daytime. To prevent collapse of pit, sand will be removed from 1m layer from the entire lease first before removing the next 1m layer. The last 1m layer will be removed at the end.

***In this Proposed Mining Plan the sand is extracted across the entire active channel during the dry season.**

UNDERGROUND WORKING: Not Applicable.

EXTENT OF MECHANIZATION: No mechanization will be done.

Table 7-2: Production Planning

S. No.	Assumptions	Quantity
1	Average Daily Production Approx.	246 m^3
2	Total excavation monthly (excluding 4 months monsoon period)	7388 m^3
3	Sand handling per man per day	2.05 m^3
4	Total manpower required per day	120

7.d. DETAILS OF EMPLOYMENT

Local manpower will be used for sand mining in the mine site. Manpower will be depended on the production capacity per day. The capacity of sand handling of a man is **2.05 m^3**, therefore, the number of man employed will depend on the per day production. As per the calculation the total **180** miners will be employed for the project.

8. STACKING OF MINERALS & WASTE

Since there is no waste or mineral rejects generation in the mine hence no proposal for the stacking is discussed under this chapter. The entire mineral produced is useable.

9. LOADING & TRANSPORTION OF MINERALS AND WASTE

9.a. LOADING OF MINERALS AT MINE SITE

The loading of riverbed sand will be done manually at mine site.

Arun K. Das;B.E.,F.C.C.,H.I.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 083/2022 *KOLKATA*

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9.b. MEANS OF TRANSPORT

The sand transportation will be done by ensuring the following:

1) All bigger trucks/dumpers having capacity 10 Tones.

2) Trucks/dumpers will be properly covered.

3) Vehicles will be provided with all safety measures like reverse alarm, back-mirror, etc.

4) Vehicles will have pollution-test certificates.

5) Regular checks will be done by the management to ensure the health of the trucks.

6) Regular water spraying at fixed interval of time.

7) Maintenance of roads to fill all pot-holes to avoid spillage.

8) Regular cleaning of road to avoid any accumulation of sand.

9) Loading and Unloading of sand will be done manually.

Arun K. Das;B.E.,F.C.C .,H.I.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
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10. ENVIRONMENTAL MANAGEMENT PLAN

The environment management plan for the riverbed mining project will be followed according to West Bengal Mining Concession Rules 2016. Afforestation by planting native tree species will be done outside the Project area, preferably in local school premises in consultation with the Gram-Panchayat.

11. MINE CLOSURE PLAN & FINANCIAL ASSURANCE

Applicant **Himanshu Santra** is the successful highest bidder of Sand Block No.: **BURDWAN-II/KALINAGAR/181(P),205(P)/F** after participating in sand block auction conducted by Government of West Bengal and will obtain sand mining lease after deed registration. The mining lease will be granted over an areas of **6.04 Acres / 2.44 Hectares** on river **Damodar** at **Mouza – Kalinagar, P.S Madhabdihi, Dist. – Purba Bardhaman,** West Bengal, over **Plot No.-181 (P), 205(P); J.L. No. – 160.**

The Mining Lease will be granted for a period of **5 years from the date of deed registration.**

Name & Address of Applicant:-

Name:	**Himanshu Santra**
Authorized signatory	**Himanshu Santra**
Address:	*MANIARI, EKLAKHI,*
	BARDHAMAN 713427

Table 11-1: Land ownership Pattern

Summary	Area (in Ha)
Government Land	2.44

EXISTING LAND USE PATTERN: The land use of the mine lease area on the riverbed of Damodar and there will be no change in land use after operation. The sand will be replenished every year during the monsoon season. The ultimate land use of the mine lease area will not be changed

REASONS FOR CLOSURE:

Not Applicable

Arun K. Das;B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
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STATUTORY OBLIGATIONS:

The Applicant will be bound to implement all the legal obligation like special conditions imposed while execution of lease deed, approval of mining plan, directives issued by the Central & State Government, conditions imposed by the Ministry of Environment & Forests, State or Central Pollution Control Board or by any other organization.

CLOSURE PLAN PREPARATION

Name: Himanshu Santra
Authorized signatory **Himanshu Santra**
Address: MANIARI, EKLAKHI,
BARDHAMAN- 713427

NAME OF THE RQP PREPARING MINING PLAN:

Shri Arun Kumar Das

RQP No. : RQP/KOL/353/2008/A
Address : Flat – 3/B, AVA Mansion
Apcar Garden (E), Asansol – 4 (WB)

REVIEW OF IMPLEMENTATION OF MINING PLAN/SCHEME OF MINING UPTO THE FINAL CLOSURE OF MINE

The area is under mining operation and during the course of mining operation the Applicant will adopt the measures for protection of environment. Whatever data for protection of environment will be, the Applicant will provide the same time to time.

MINED OUT LAND

The Character of the project area on the riverbed of Damodar will remain unchanged even after operation. The sand will be replenished every year during the monsoon season. The ultimate land use of the entire lease area will remain intact.

Arun K. Das, B.E., F.C.C., H.I.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
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AIR QUALITY MANAGEMENT

Ambient air quality has been monitored by us and external agency. For baseline study, in each season monitoring will be carried out on two days in a week with 24 hourly samples being collected on each day in future as per the norms laid down by MOEF & CC. Emission of dust due to movement of vehicles and machineries will produce impact on air. As such there is no need for prevention of pollution of Air quality except sprinkling of water on haul road etc. in dry season.

WASTE MANAGEMENT

There is no generation of waste during mining operation, therefore, no provision of stock yard is proposed. The entire mineral produced is useable.

TOPSOIL MANAGEMENT

There is no generation of topsoil.

TAILING DAM MANAGEMENT

Not Applicable.

INFRASTRUCTURE

The Applicant will construct the mobile office cum attendance room and first aid center, workshop as per the site selection. A rest shelter will be provided near working quarry. Provision of potable water will be made available in the shelters.

DISPOSAL OF MINING MACHINERY

Not Applicable

SAFETY & SECURITY

D.G.M.S. approved Safety shoes and helmets are being provided to the all workmen. During proposed plan period there is no proposal to close the mine. Security guards are engaged for security.

DISASTER MANAGEMENT AND RISK ASSESSMENT

High risk factors such as landslide, subsidence flood, fire, tailing dam failure etc are not encountered nor anticipated during proposed five years plan period. As such, emergency plan for quick evacuation, protective measures are not proposed. Also, no local habitant exists as the working area is far away from the locality. **There is no major bridge or highway within 5 Km on either sides of the proposed Mining area.**

Arun K. Das; B.E., F.C.C., I.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
083/2022
KOLKATA

AIR QUALITY MANAGEMENT

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Arun K. Das;B.E.,F.C.C.,H.T.M.
R.Q.P./KOL/353/2008/A

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CARE AND MAINTENANCE DURING TEMPORARY DISCONTINUANCE

Due to unforeseen reason the mine will be a closed temporarily then proper care of workers and staffs will be taken. Temporary discontinuance notice in the prescribed form will be sent to the concerned authority of D.G.M.S., concerned State Government and concerned Labour Department within the stipulated time. Security guards to take care of the infrastructure shall be kept under the roll of the management in case of any temporary discontinuation.

ECONOMIC REPERCUSSIONS OF CLOSURE OF MINE AND MANPOWER RETRENCHMENTS

At this stage there will be no manpower retrenchment etc. in the area, hence, no proposal for these have been discussed.

NUMBER OF LOCAL RESIDENTS EMPLOYED IN THE MINE, STATUS OF THE CONTINUATION FAMILY OCCUPATION AND SCOPE OF JOINING THE OCCUPATION BACK.

This project operation will provide livelihood to the poorest section of the society. It provides employment to the people residing in vicinity directly or indirectly by the project,

COMPENSATION GIVEN OR TO BE GIVEN TO THE EMPLOYEES CONNECTING WITH SUSTENANCE OF HIMSELF AND THEIR FAMILY MEMBERS.

Not Applicable

SATELLITE OCCUPATIONS CONNECTED TO THE MINING INDUSTRY - NUMBER OF PERSONS ENGAGED THEREIN - CONTINUANCE OF SUCH BUSINESS AFTER MINE CLOSES.

Not Applicable

CONTINUED ENGAGEMENT OF EMPLOYEES IN THE REHABILITATED STATUS OF MINING LEASE AREA AND ANY OTHER REMNANT ACTIVITIES

The Applicant will habilitate a large area and more people of the local residents are engaged in cultivation. Moreover the company will organize community development programmes in the nearby villages and more people will be benefited by these programmes.

ENVISAGED REPERCUSSIONS ON THE EXPECTATION OF THE SOCIETY AROUND DUE TO CLOSURE OF MINE

Not Applicable.

TIME SCHEDULING FOR ABANDONMENT

Not Applicable.

Arun K. Das;B.E.,F.C.C.,H.I.M.
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 063/2022 KOLKATA

ABANDONMENT COST

Not Applicable.

FINANCIAL ASSURANCE

The financial assurance will be submitted as per the rule to the concerned authority in the form of bank guarantee before the execution of the lease.

12. Plans and Sections: Plates are annexed as mentioned below:-

Plate-1: Mining Lease Plan on Mouza Sheet

Plate-2: Key Plan

Plate-3: Location Plan(Google)

Plate-4: Surface Plan and Sections

Plate-5: Surface Topographic Plan, Geological Plan and Sections

Plate-6: Year-wise development Plan

Plate-7: Composite Plan and Sections showing pit layouts, stacks of minerals and waste, etc. (Mine Closure Plan)

Plate-8: Conceptual Mining Plan

Plate-9:Environmental Plan

Plate-10: Location of the Project Site

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 083/2022 KOLKATA

Arun K. Das;B.E.,F.C.C.,H.I.M.
R.Q.P./KOL/353/2008/A

This Mining Plan is approved Subject to compliance with the guidelines of MoEF&CC, GoI and provisions of WBMM&C Rules, 2016

Office of the Chief Mining Officer Govt. of West Bengal

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APPROVED
27/10/2021
(Joydeb Das)
Chief Mining Officer
Govt. of West Bengal

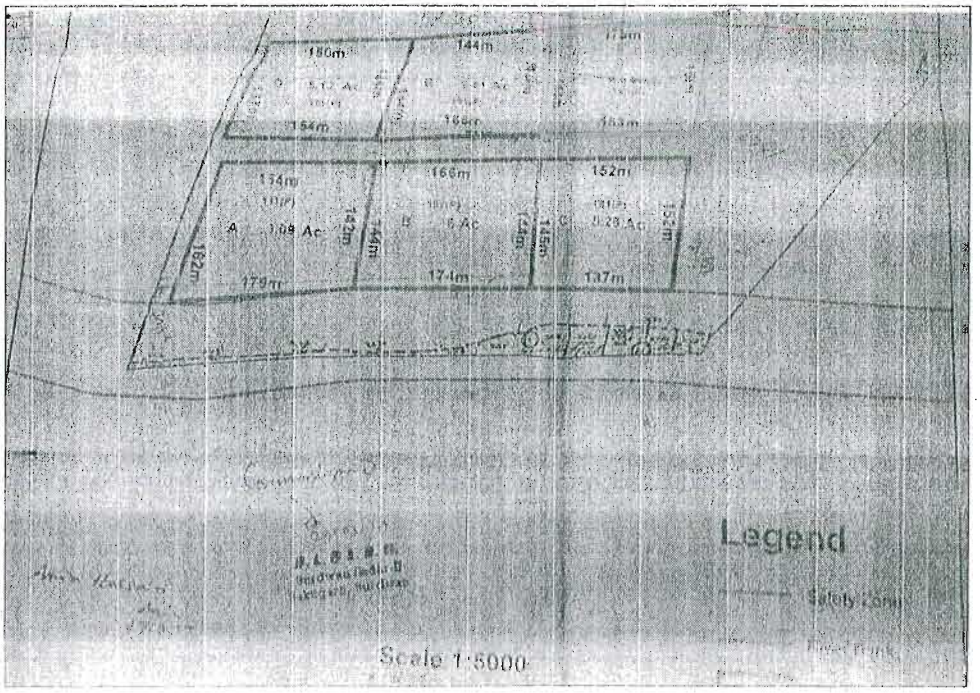

PLATE-I

SCALE:- 1:3960

HIMANSHU SANTRA		
GPS COORDINATE		
POINT	LATITUDE	LONGITUDE
A	23°10'17.06"	87°57'11.56"
B	23°10'17.65"	87°57'16.93"
C	23°10'21.84"	87°57'18.06"
D	23°10'21.24"	87°57'11.91"
PIT CENTER POSITION	23°10'19.28"	87°57'14.56"

AREA:- 6.04 ACRE (2.44 HECTARS)

INDEX

PIT BOUNDARY

MINE BOUNDARY

MOUZA MAP

HIMANSHU SANTRA
MOUZA - KALINAGAR, JL NO-160
P.S - MADHABDIHI,
DISTRICT- PURBA BARDHAMAN
WEST BENGAL
PLOT NOS - 181(P), 205(P)

PREPARED BY:-	
ARUN K. DAS RQP/KOL/353/2008	Arun K. Das:B.E.,F.C.C. H.T.M. R.Q.P./KOL/353/2008/A.

Office of the Chief Mining Officer Govt. of West Bengal

PARAMITA PAL GOVT. OF WEST BENGAL
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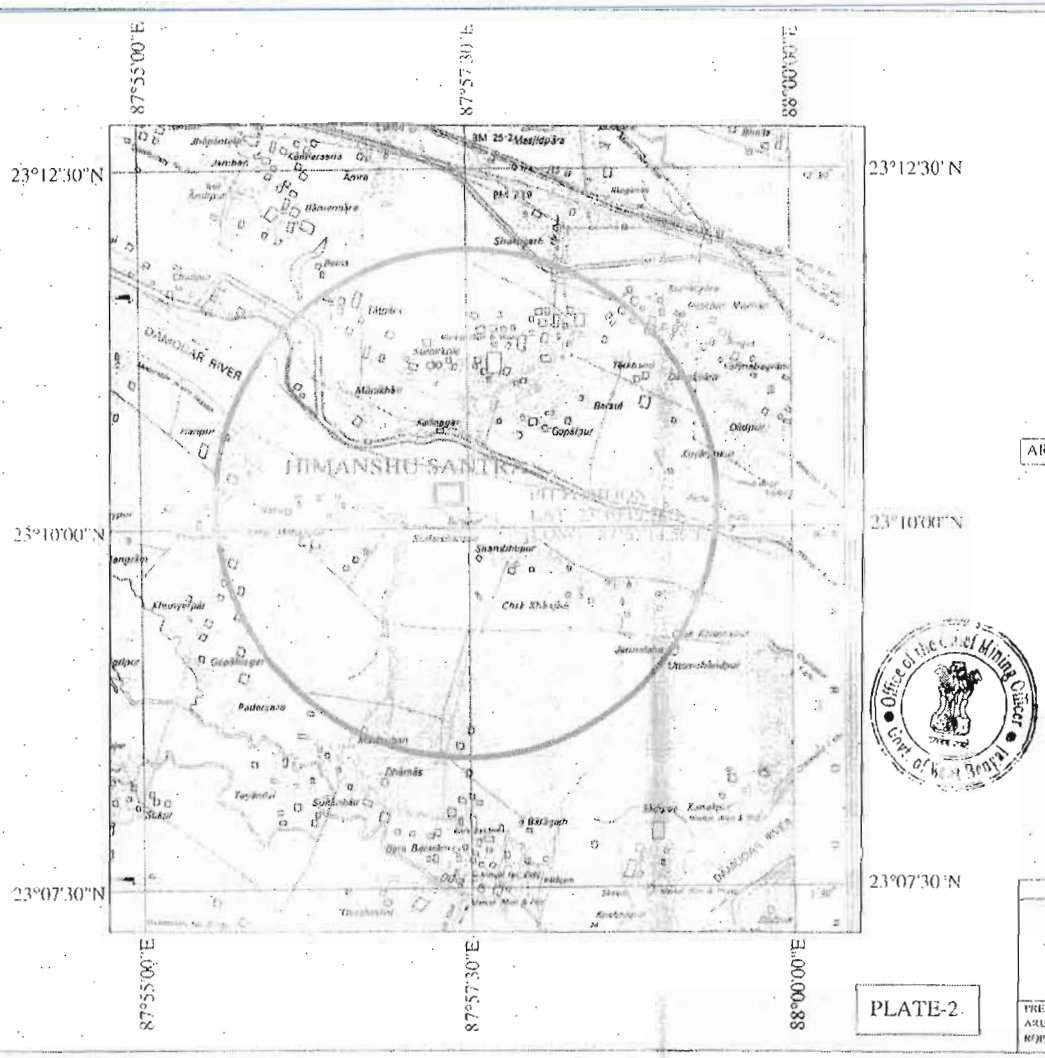
KOLKATA



PARAMITA PAL GOVT. OF WEST BENGAL
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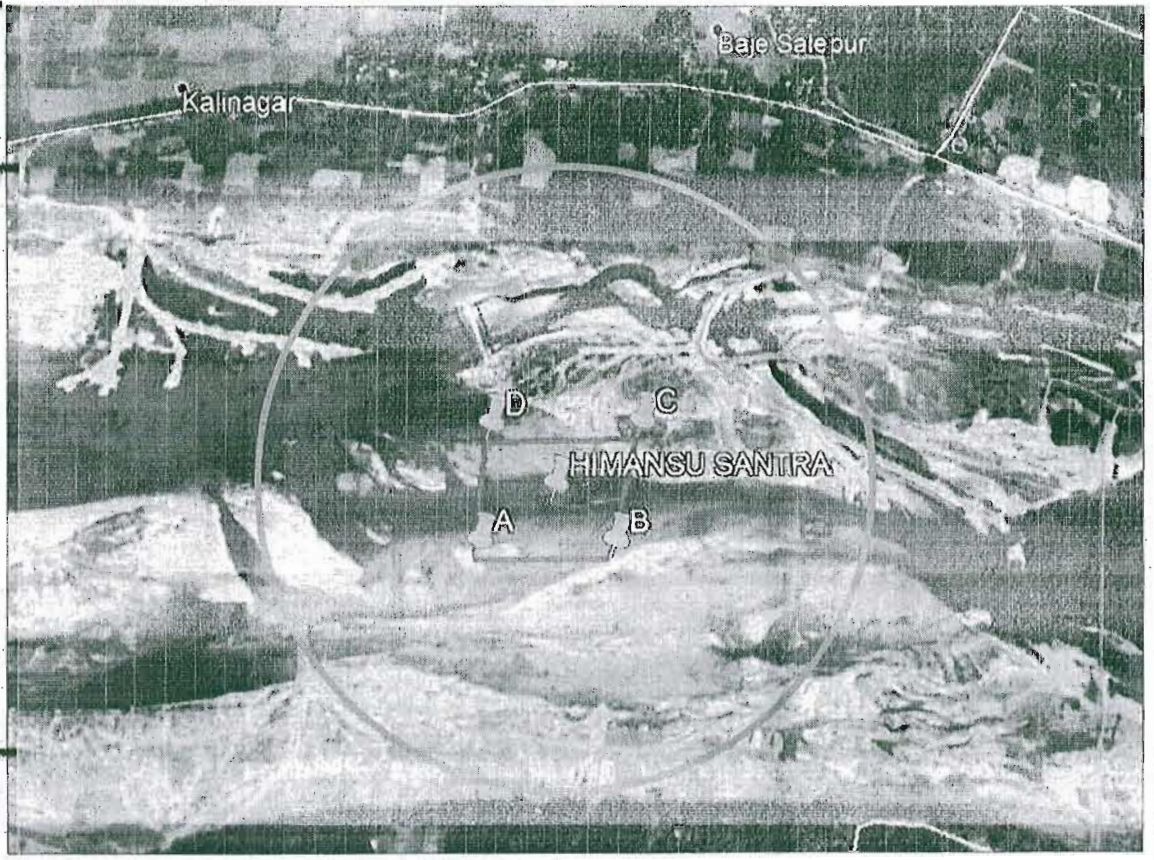
KOLKATA

PLATE-3



SCALE:- 1:5000

AREA:- 6.04 ACRE (2.44 HECTARS)

INDEX

PIT BOUNDARY	
MINE BOUNDARY	
500M CIRCLE	

HIMANSHU SANTRA		
GPS CO-ORDINATE:		
POINT	LATITUDE	LONGITUDE
A	23°10'17.05"	87°57'11.56"
B	23°10'17.05"	87°57'16.95"
C	23°10'21.84"	87°57'18.05"
D	23°10'21.74"	87°57'11.91"
PIT CENTER POSITION	23°10'19.28"	87°57'14.56"

GOOGLE MAP

HIMANSHU SANTRA
MOUZA- KALINAGAR, H. NO-160
P.S- MADHABDIH,
DISTRICT- PURBA BARDHAMAN
WEST BENGAL
PLOT NOS - 180(P), 208(P)

PREPARED BY
ARUNK DAS
RQP/KOL/353/2008

Arun K. Das; B.E., F.C.C., F.I.M.
R.Q.P./KOL/353/2008/A.

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
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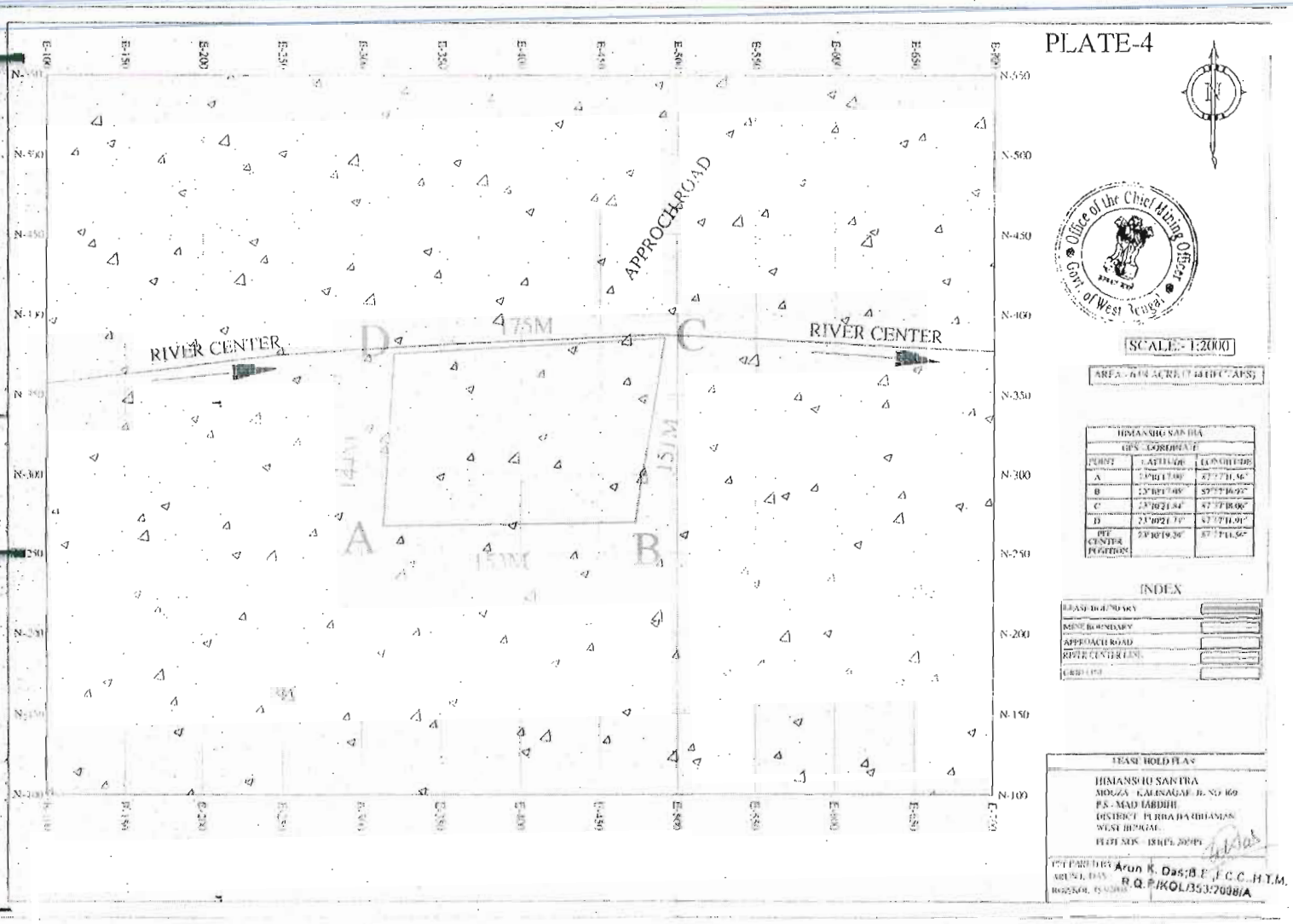
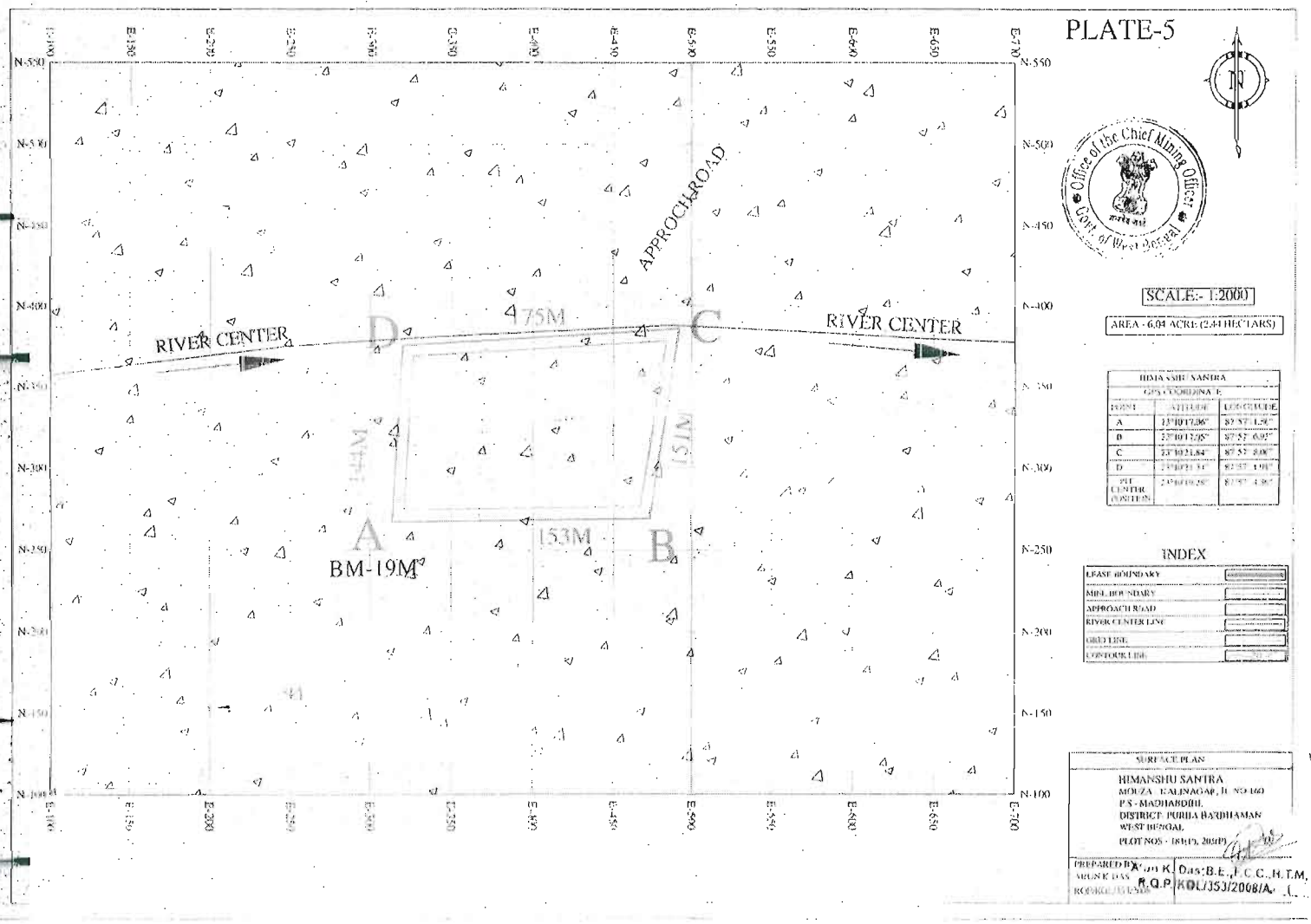
KOLKATA





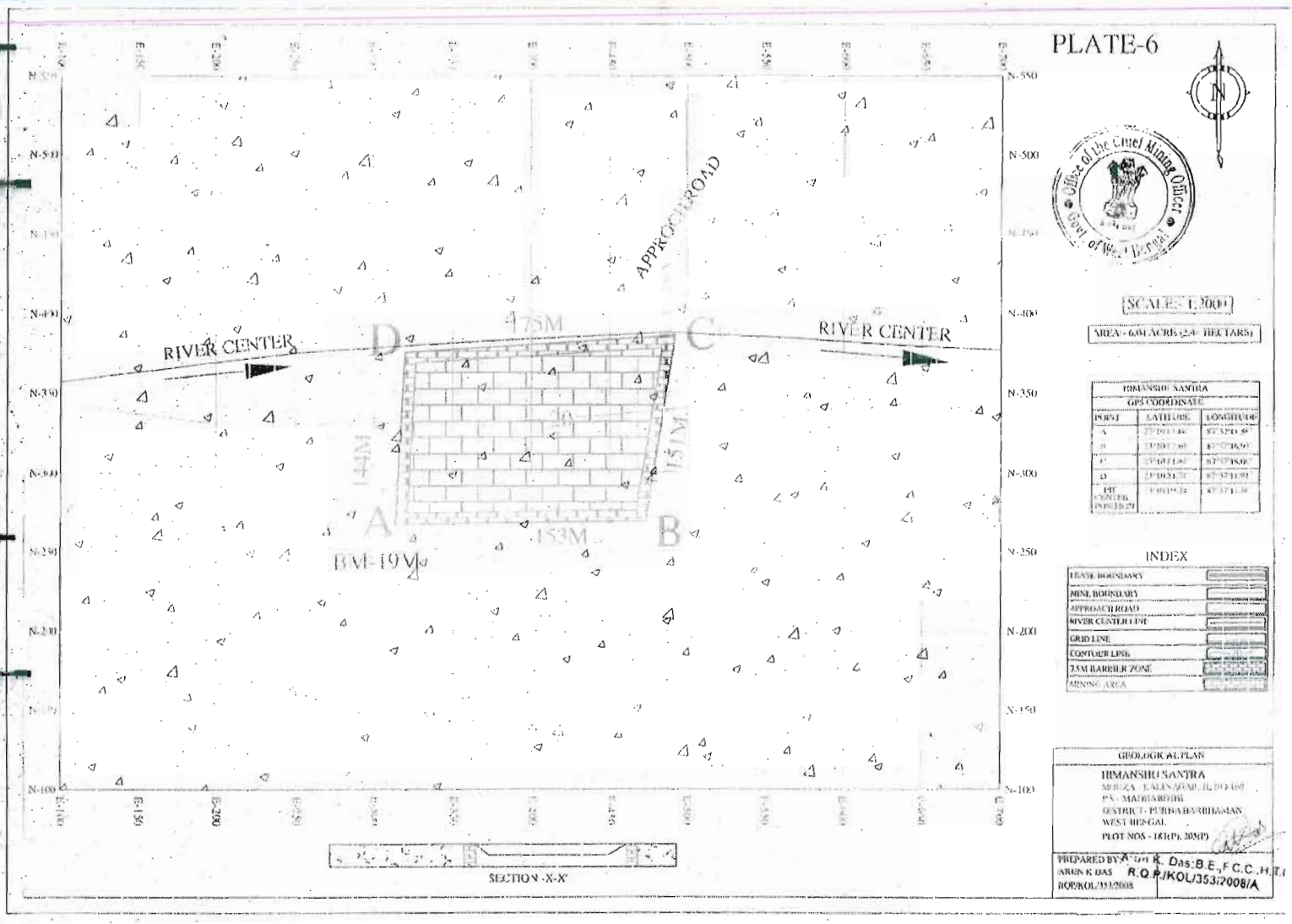


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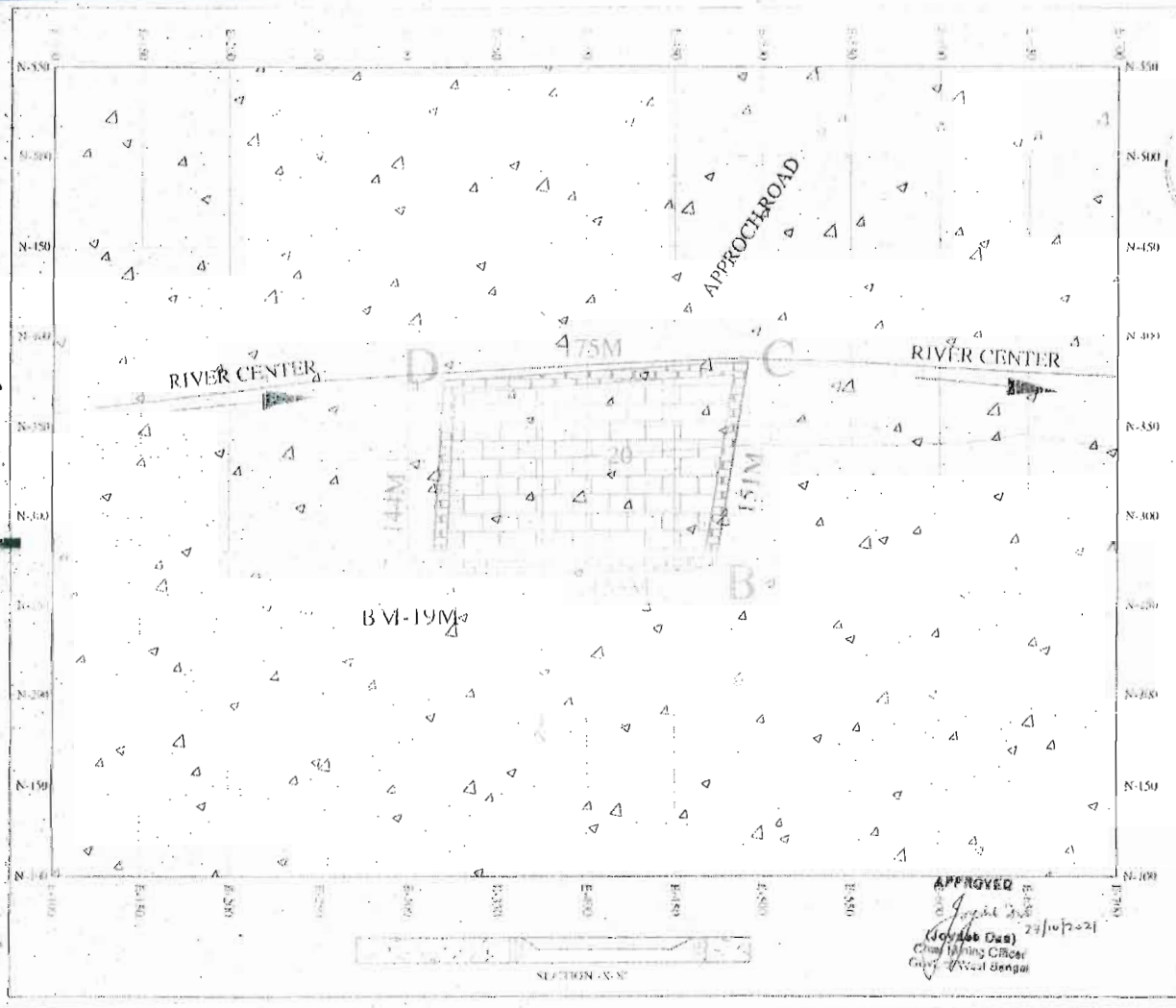
PLATE-7



SCALE:- 1:2000

AREA 5.01 ACRE (2.40 HECTARES)

HIMANSHU SANTRA

GPS COORDINATE

POINT	LATITUDE	LONGITUDE
A	21°16'17.68"	87°51'11.56"
B	21°16'17.65"	87°51'16.91"
C	21°16'11.84"	87°51'16.96"
D	21°16'11.74"	87°51'11.91"
PIT CENTER POSITION	21°16'14.75"	87°51'14.56"

INDEX

LEASE BOUNDARY	
MINE BOUNDARY	
APPROACH ROAD	
RIVER CENTER LINE	
HIGH LINE	
CONTOUR LINE	
7.5M BARRIER ZONE	
MINING AREA	

SCHEME PLAN AND SECTION

HIMANSHU SANTRA
MOUZA - GALNAGAR, JL NO-160
P.S. - MAJHERDIH
DISTRICT - PURULIA (PURBASHAN)
WEST BENGAL
PLOT NOS - 1310, 1312, 1313

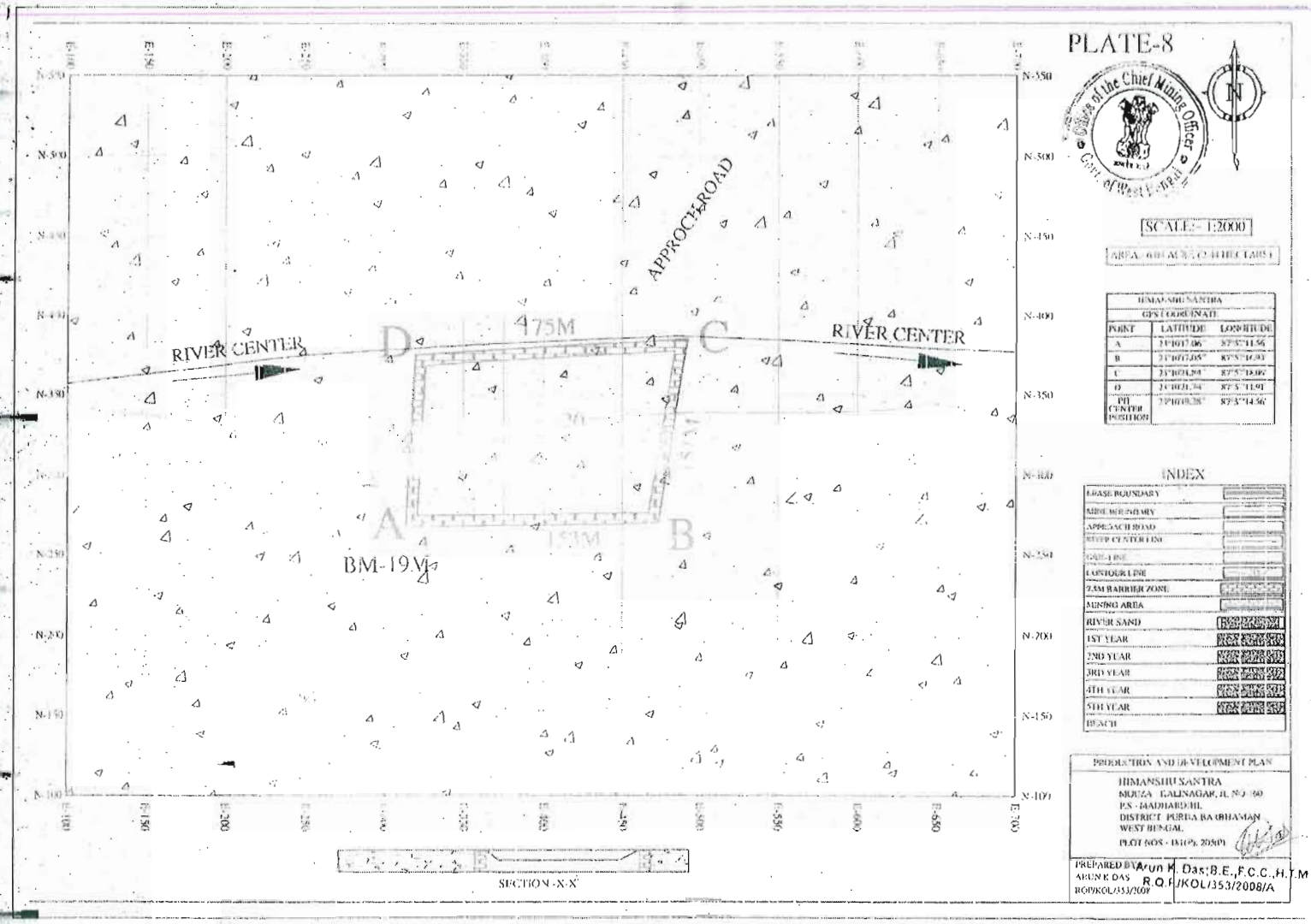
PREPARED BY
ARUN K DAS
ROURKELA (ODISHA)

Arun K. Das, B.E., F.C.C., H.T.M.
R.Q.P./KOL/353/2008/A

APPROVED
(Joydeb Das)
Chief Mining Officer
Govt. of West Bengal
27/10/2021

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
083/2022
KOLKATA

PLATE-8



Office of the Chief Mining Officer
Govt. of West Bengal

SCALE:- 1:2000

AREA: 6.00 ACRES (2.43 HECTARES)

HIMANSHU SANTRA
GPS ORDINATE

POINT	LATITUDE	LONGITUDE
A	21°10'17.06"	87°5'11.56"
B	21°10'17.05"	87°5'14.93"
C	21°10'04.94"	87°5'15.02"
D	21°10'03.94"	87°5'11.91"
DT CENTER POSITION	21°10'10.28"	87°5'14.56"

INDEX

LEASE BOUNDARY	
MINE BOUNDARY	
APPROACH ROAD	
RIVER CENTER LINE	
GRID LINE	
CONTOUR LINE	
7.5M BARRIER ZONE	
MINING AREA	
RIVER SAND	
1ST YEAR	
2ND YEAR	
3RD YEAR	
4TH YEAR	
5TH YEAR	
BENCH	

PRODUCTION AND DEVELOPMENT PLAN

HIMANSHU SANTRA
MOUZA - KALNAGAR, JL NO :- 60
P.S. - HALDIA(HL)
DISTRICT - PURBA BARDHAMAN
WEST BENGAL
PLOT NOS - 1410(P), 2050(P)

PREPARED BY
ARUN K DAS
ROY/KOL/353/2008

Arun K. Das; B.E., F.C.C., H.T.M
R.Q.P./KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
083/2022
KOLKATA

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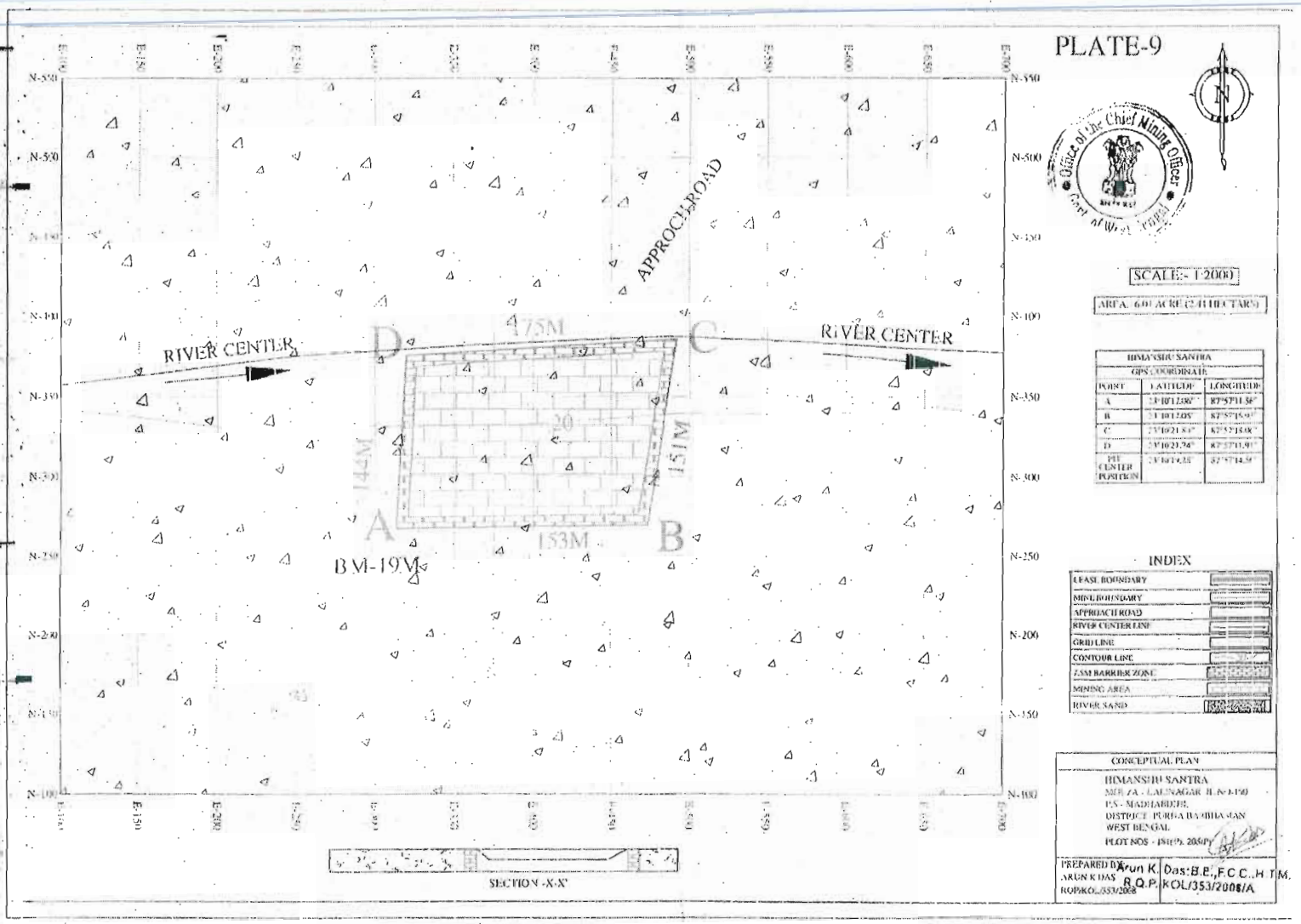
PLATE-9



Office of the Chief Mining Officer, Govt. of West Bengal

SCALE:- 1:2000

AREA- 6.01 ACRE(2.4 HECTARS)

HIMANSHU SANTRA

GPS COORDINATE

POINT	LATITUDE	LONGITUDE
A	23°10'11.86"	87°57'11.58"
B	23°10'12.05"	87°57'15.91"
C	23°10'21.83"	87°57'15.68"
D	23°10'21.74"	87°57'11.91"
PIT CENTER POSITION	23°10'19.28"	87°57'14.59"

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LEASE BOUNDARY	
MINE BOUNDARY	
APPROACH ROAD	
RIVER CENTER LINE	
GRID LINE	
CONTOUR LINE	
25M BARRIER ZONE	
MINING AREA	
RIVER SAND	

CONCEPTUAL PLAN

HIMANSHU SANTRA
MOUZA - LALNAGAR, J.L.NO-150
P.S.- MADHABDIH,
DISTRICT- PURBA BARDHAMAN
WEST BENGAL
PLOT NOS - 1811(P), 2059(P)

PREPARED BY: ARUN K DAS, ROP/KOL/353/2008 | Arun K. Das: B.E., F.C.C., H.T.M. R.Q.P. KOL/353/2008/A

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
083/2022
KOLKATA

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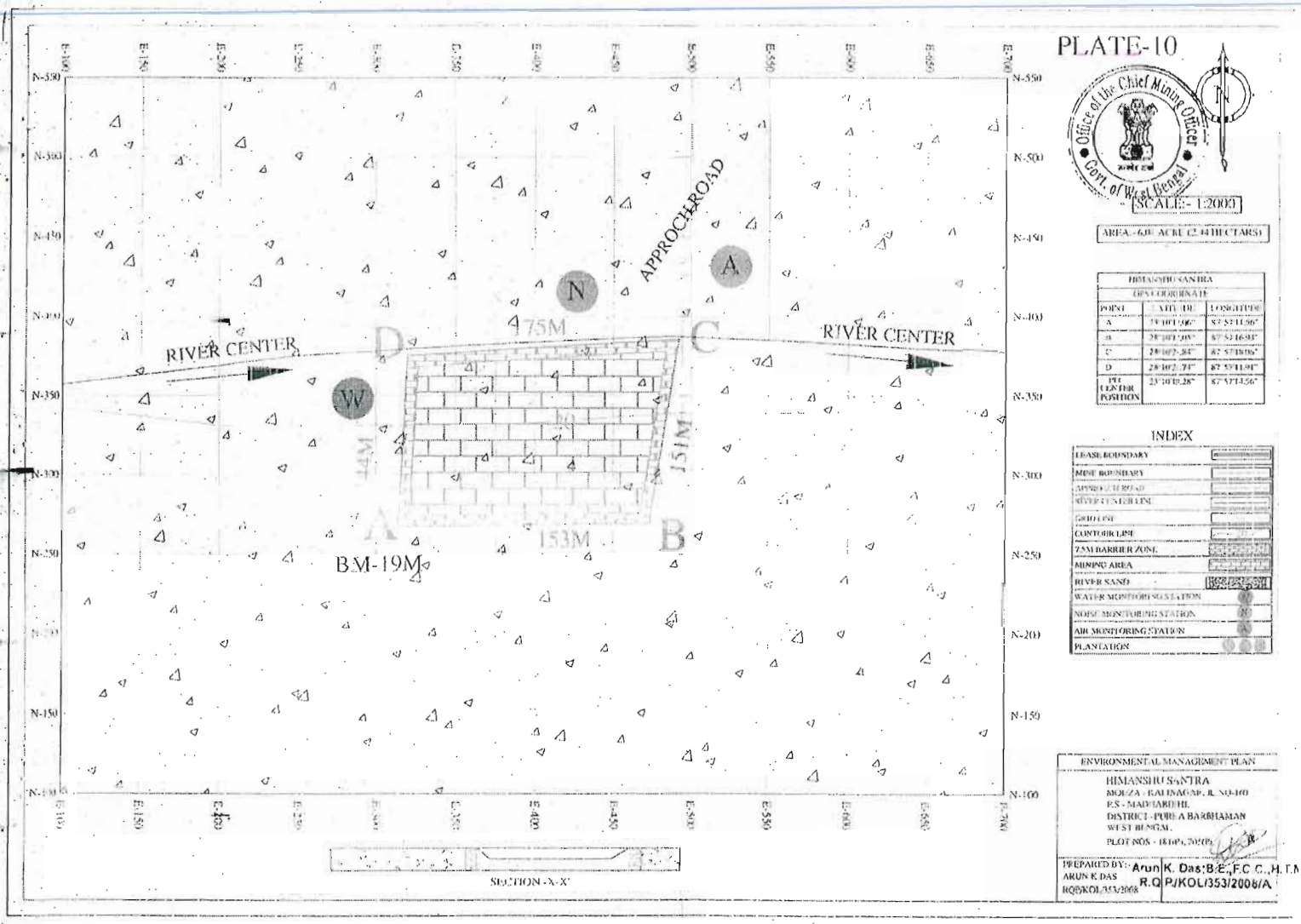
PLATE-10



Office of the Chief Mining Officer
Govt. of West Bengal

SCALE:- 1:2000

AREA - 6.06 ACRE (2.44 HECTARS)

HIMANSHU SANTRA
GPS COORDINATE

POINT	ATTITUDE	LONGITUDE
A	23°10'13.06"	87°57'11.50"
B	23°10'12.09"	87°57'16.93"
C	23°10'02.84"	87°57'18.06"
D	23°10'02.74"	87°57'11.94"
PIT CENTER POSITION	23°10'10.28"	87°57'13.56"

INDEX

LEASE BOUNDARY	
MINE BOUNDARY	
APPROACH ROAD	
RIVER CENTER LINE	
GRID LINE	
CONTOUR LINE	
7.5M BARRIER ZONE	
MINING AREA	
RIVER SAND	
WATER MONITORING STATION	W
NOISE MONITORING STATION	N
AIR MONITORING STATION	A
PLANTATION	

ENVIRONMENTAL MANAGEMENT PLAN

HIMANSHU SANTRA
MOUZA - RAJNAGAR, J.L. NO-140
P.S - MAHISADAL
DISTRICT - PURBA BARDHAMAN
WEST BENGAL
PLOT NOS - 1810, 2020

PREPARED BY:- ARUN K DAS
IQP/KOL/353/2008

Arun K. Das; B.E., F.C.C., H.T.M.
R.Q. P/KOL/353/2006/A

PARAMITA PAL GOVT. OF WEST BENGAL
NOTARY
REGD NO
0A3/2022
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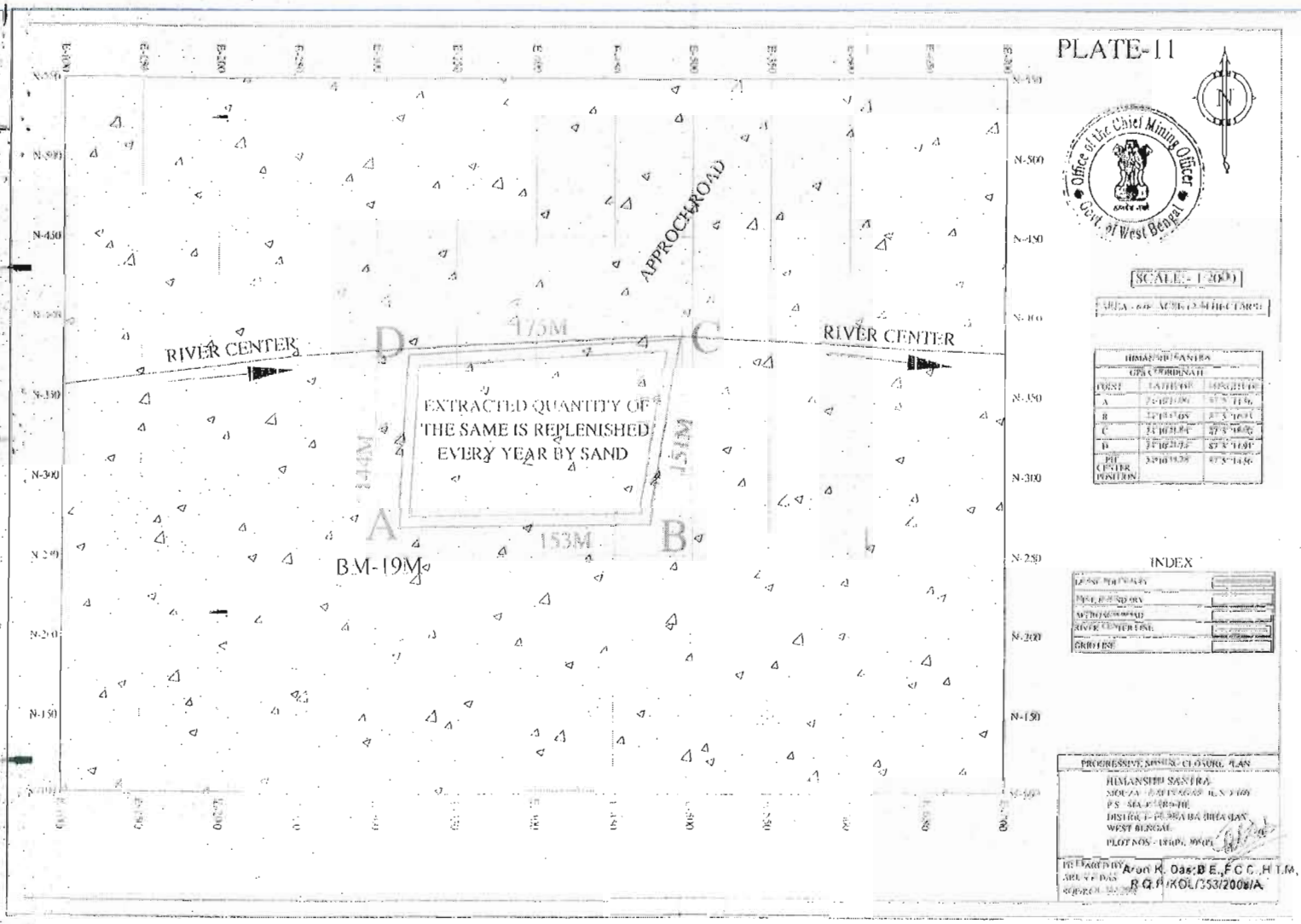

सत्यमेव जयते

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Level Expert Appraisal Committee(SEAC), WEST BENGAL)
***

Minutes of 41st meeting of reconstituted SEAC State Level Expert Appraisal Committee meeting held from 19/06/2024 to 19/06/2024

Date: 03/07/2024

MoM ID:	EC/MOM/SEAC/275170/6/2024
Agenda ID:	EC/AGENDA/SEAC/275170/6/2024
Meeting Venue:	Conference Room, Paribesh Bhawan, West Bengal Pollution Control Board, Bidhannagar, Kolkata – 700 106.
Meeting Mode:	Hybrid
Date & Time:	

19/06/2024	02:00 PM	06:00 PM

1. Opening remarks

The Member Secretary, SEAC welcome the Members & the Chairman of the Committee and apprised them about the Agenda of the meeting.

2. Confirmation of the minutes of previous meeting

The proceedings of 40th meeting of SEAC held on 08.06.2024 were prepared and uploaded in the Parivesh Portal on 20.06.2024 with the approval of all the Members & the Competent Authority. SEAC confirmed the same.

3. Details of proposals considered by the committee

Day 1 -19/06/2024

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

Residential Complex by Shree RSH Projects Private Limited by **shree rsh projects private limited** located at **24 P ARAGANAS NORTH,WEST BENGAL**

Proposal For		Fresh EC	
Proposal No	**File No**	**Submission Date**	**Activity (Schedule Item)**
SIA/WB/INFRA2/472961/2024	2N-105/2024(E)	08/06/2024	Building / Construction (8(a))

PARAMITA PAL GOVT. OF WEST BENGAL NOTARY REGD NO 083/2022 KOLKATA

3.10. Agenda Item No 10:

55

3.10.1. Details of the proposal

Kalinagar Sand Mine by **HIMANSHU SANTRA** located at **PURBA BARDHAMAN,WEST BENGAL**			
Proposal For		Fresh ToR	
Proposal No	**File No**	**Submission Date**	**Activity (Schedule Item)**
SIA/WB/MIN/476968/2024	2N-264/2023(E)	07/06/2024	Mining of minerals (1(a))

3.10.2. Project Salient Features

- This is a proposal for Kalinagar Sand Mine on the BARDHAMAN-II/KALINAGAR/181(P), 205(P)/F sand block over an area of 2.44 ha (6.04 Acres) on the river Damodar at Plot No: 181(P), 205(P), J.L. No.- 160, Mouza: Kalinagar, P.S.- Madhabdihi, Block – Bardhaman Sadar II, District: Purba Bardhaman, West Bengal.
- **The PP has not uploaded cluster certificate from the competent authority.**
- The PP has uploaded pre-feasibility report for the proposed project.
- The PP has uploaded the copy of valid LoI from the competent authority.

3.10.3. Deliberations by the committee in previous meetings

N/A

3.10.4. Deliberations by the SEAC in current meetings

- Based on the submission and presentation made by the PP, the SEAC observed that **the plot area** for the proposed project as per the geo-coordinates mentioned in the revised Mining Plan uploaded by the PP **falls within the potential mining zone** recorded in the approved District Survey Report (DSR) of Purba Bardhaman district.
- Based on the presentation and submission made by the PP, the SEAC **recommended** issuance of **Standard Terms of Reference** for EIA preparation for the project with the following additional conditions :-

1) Cluster Certificate from the competent authority

2) Taking into consideration the replenishment rates reported in the approved DSR for Purba Bardhaman, both geological and mining reserves for second year (of production) onwards may be re-estimated and the annual production levels may be modified accordingly.

3) Drone videography of the entire project area explicitly showing the entire project site along with the existing tree plantation/green belt. Minimum 2 minute video to be submitted.

4) Photographs of the site mentioning the geo-coordinates.

5) Standard practice of management of the intermediate storage area should be submitted.

6) Means of access and egress between the embankment and the sand quarry may be clearly earmarked. The Project Proponent must commit that no hard toping or paving of any haulage route within the riverbed will be attempted.

7) A plan on the management and handling of sand during the period of intermediate stockpiling should be submitted.

8) The PP has to do tree plantation in an area equivalent to 33% of the lease area @2500 trees / ha within first two years from the starting of the mining operation. A Progressive Greenbelt Plan may be prepared. The project area being entirely on the riverbed, afforestation/ vegetation should be attempted alongside the village roads or other public land. This may be done with prior approval of the local self-governing bodies. If no public land is available for the purpose the Project Proponent shall arrange for land with his personal means. To enhance success/ survival rate the plantation shall be attempted during the first two years of the project life and the plantation so done shall be taken care of during the rest of the project life. Species of the plant selected should be self-sustaining in that particular region. Spatial year wise progressive plantation programme to be submitted.

9) Plan showing spatial year wise distribution of the proposed greenbelt has to be submitted along-with supporting documents of administrative approval/s.

10) Being a mine in operation, the plantation created so far may be submitted with geotagged photographs.

11) EIA should also include detailed study of the baseline condition and impact on aquatic flora and fauna.

12) The project cost may include the auction bid value, estimated royalty to be paid, cost of any infrastructure built like office space, stockyard, etc. The calculation/documents to estimate the project cost should be submitted. The planned expenditure for components like need-based activities may be derived based on the project cost.

13) A need-based EMP may be prepared in accordance with the MoEF&CC Office Memorandum vide F. No. 22-65/2017.IA.III dated 30.09.2020. Record of communications made in this regard with the identified/ intended beneficiaries (schools/ institutions etc) may also be uploaded. Evidence of the activities already done should be provided by photographs with geo-coordinates. The activities should be completed within the first two years of the project life.

14) A study report on base flow level measured at 5 points with date and supporting photographs should be submitted. It should be committed that mining will be done at least 1m above the base flow level. Accordingly, if required, the excavation plan may also be revised.

15) Management plan including the final closure plan of haul road to be submitted.

16) Sieve analysis report for grain size distribution should be provided.

17) Study and protection plan of the aquatic life available both during the mining and non-mining seasons should be provided.

The PP shall upload the EIA/EMP report along with the documents / submissions / clarifications sought above in the PARIVESH portal while applying for environmental clearance.

All the documents should be duly signed both by the project proponent and environmental the consultant.

3.10.5. Recommendation of SEAC

Recommended

3.10.6. Details of Terms of Reference

3.10.6.1. Specific

	A. STANDARD TERMS OF REFERENCE
1.	1. Year-wise production details since 1994 should be given, clearly stating the highest production achieved in one year prior to 1994. It may also be categorically informed whether there had been any increase in produc after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994. 2. A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should given. 3. All documents including approved mine plan, EIA and Public Hearing should be compatible with one anothe terms of the mine lease area, production levels, waste generation and its management, mining technology etc.

should be in the name of the lessee.

4. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposh topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the propc area should clearly show the land use and other ecological features of the study area (core and buffer zone).

5. Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of area, geomorphology of land forms of the area, existing minerals and mining history of the area, important w bodies, streams and rivers and soil characteristics.

6. Details about the land proposed for mining activities should be given with information as to whether mir conforms to the land use policy of the State; land diversion for mining should have approval from State land board or the concerned authority.

7. It should be clearly stated whether the proponent Company has a well laid down Environment Policy appro by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed opera process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest nor conditions? The hierarchical system or administrative order of the Company to deal with the environme issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of r compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholc or stakeholders at large, may also be detailed in the EIA Report.

8. Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in c of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case shc also be provided.

9. The study area will comprise of 10 km zone around the mine lease from lease periphery and the data containe the EIA such as waste generation etc. should be for the life of the mine / lease period.

10. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, natic park, migratory routes of fauna, water bodies, human settlements and other ecological features should indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational post operational phases and submitted. Impact, if any, of change of land use should be given.

11. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance f mine lease, its land use, R&R issues, if any, should be given.

12. A Certificate from the Competent Authority in the State Forest Department should be provided, confirming involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Propor regarding the status of forests, the site may be inspected by the State Forest Department along with the Regic Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regarc mentioned above be issued. In all such cases, it would be desirable for representative of the State Fo Department to assist the Expert Appraisal Committees.

13. Status of forestry clearance for the broken up area and virgin forestland involved in the Project inclu deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of forestry clearance should also be furnished.

14. Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Fo Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

15. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

16. A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and det furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordin detailed mitigative measures required, should be worked out with cost implications and submitted.

17. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/Elepl Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indica supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should obtained from the Standing Committee of National Board of Wildlife and copy furnished.

18. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species c authenticated, separately for core and buffer zone should be furnished based on such primary field survey, cle indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, necessary plan along with budgetary provisions for their conservation should be prepared in consultation v State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing same should be made as part of the project cost.

19. Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Rar

(attracting court restrictions for mining operations), should also be indicated and where so required, cleara certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secu and furnished to the effect that the proposed mining activities could be considered.

20. Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarca LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, shoul furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the conce Coastal Zone Management Authority).

21. R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respec SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-w should be undertaken to assess their requirements, and action programmes prepared and submitted accordin integrating the sectorial programmes of line departments of the State Government. It may be clearly brought whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shiftin village(s) including their R&R and socio-economic aspects should be discussed in the Report.

22. One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon seaso December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notificatio 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other dat compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should als collected. The location of the monitoring stations should be such as to represent whole of the study area justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There sh be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. mineralogical composition of PM10, particularly for free silica, should be given.

23. Air quality modeling should be carried out for prediction of impact of the project on the air quality of the are should also take into account the impact of movement of vehicles for transportation of mineral. The details o model used and input parameters used for modeling should be provided. The air quality contours may be sh on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

24. The water requirement for the Project, its availability and source should be furnished. A detailed water bala should also be provided. Fresh water requirement for the Project should be indicated.

25. Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project sh be provided.

26. Description of water conservation measures proposed to be adopted in the Project should be given. Detail rainwater harvesting proposed in the Project, if any, should be provided.

27. Impact of the Project on the water quality, both surface and groundwater, should be assessed and neces safeguard measures, if any required, should be provided.

28. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Neces data and documentation in this regard may be provided. In case the working will intersect groundwater tabl detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall inc details of the aquifers present and impact of mining activities on these aquifers. Necessary permission f Central Ground Water Authority for working below ground water and for pumping of ground water should be obtained and copy furnished.

29. Details of any stream, seasonal or otherwise, passing through the lease area and modification / diver proposed, if any, and the impact of the same on the hydrology should be brought out.

30. Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and A schematic diagram may also be provided for the same.

31. A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the li and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will hav be executed up front on commencement of the Project. Phase-wise plan of plantation and compensa afforestation should be charted clearly indicating the area to be covered under plantation and the species t planted. The details of plantation already done should be given. The plant species selected for green belt sh have greater ecological value and should be of good utility value to the local population with emphasis on l and native species and the species which are tolerant to pollution.

32. Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck tr as a result of the Project in the present road network (including those outside the Project area) should be wo out, indicating whether it is capable of handling the incremental load. Arrangement for improving infrastructure, if contemplated (including action to be taken by other agencies such as State Government) sh be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Cong

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Guidelines.

33. Details of the onsite shelter and facilities to be provided to the mine workers should be included in the Report.

34. Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and adequate number of sections) should be given in the EIA report.

35. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt in detail. Details of pre-placement medical examination and periodical medical examination schedules should incorporated in the EMP. The project specific occupational health mitigation measures with required facili proposed in the mining area may be detailed.

36. Public health implications of the Project and related activities for the population in the impact zone should systematically evaluated and the proposed remedial measures should be detailed along with budge allocations.

37. Measures of socio-economic significance and influence to the local community proposed to be provided by Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time fra for implementation.

38. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter- include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational he impacts besides other impacts specific to the proposed Project.

39. Public Hearing points raised and commitment of the Project Proponent on the same along with time bo Action Plan with budgetary provisions to implement the same should be provided and also incorporated in final EIA/EMP Report of the Project.

40. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law aga the Project should be given.

41. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of E should be clearly spelt out.

42. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.

43. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall cle indicate environmental, social, economic, employment potential, etc.

44. Besides the above, the below mentioned general points are also to be followed:-

a. Executive Summary of the EIA/EMP Report (enclosed as **Annexure – A**).

b. All documents to be properly referenced with index and continuous page numbering.

c. Where data are presented in the Report especially in Tables, the period in which the data were collected and sources should be indicated.

d. Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available du appraisal of the Project.

e. Where the documents provided are in a language other than English, an English translation should be provid

f. The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall be filled and submitted.

g. While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants iss by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on website of this Ministry, should be followed.

h. Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in struc and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will e conducting the PH again with the revised documentation.

i. As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compli of the conditions stipulated in the environment clearance for the existing operations of the project, shoul obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may applicable.

j. The EIA report should also include (i) surface plan of the area indicating contours of main topographic featu drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and exte dumps, if any, clearly showing the land features of the adjoining area.

B. Additional Terms of Reference imposed by SEAC –

1. Cluster Certificate from the competent authority.

2. Taking into consideration the replenishment rates reported in the approved DSR for Purba Bardhan both geological and mining reserves for second year (of production) onwards may be re-estimated and annual production levels may be modified accordingly.

3. Drone videography of the entire project area explicitly showing the entire project site along with existing tree plantation/green belt. Minimum 2 minute video to be submitted.

4. Photographs of the site mentioning the geo-coordinates.

5. Standard practice of management of the intermediate storage area should be submitted.

6. Means of access and egress between the embankment and the sand quarry may be clearly earmarl The Project Proponent must commit that no hard toping or paving of any haulage route within the river will be attempted.

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9. Plan showing spatial year wise distribution of the proposed greenbelt has to be submitted along-v supporting documents of administrative approval/s.

1. 10. Being a mine in operation, the plantation created so far may be submitted with geotagged photograp

11. EIA should also include detailed study of the baseline condition and impact on aquatic flora and faur

12. The project cost may include the auction bid value, estimated royalty to be paid, cost of infrastructure built like office space, stockyard, etc. The calculation/documents to estimate the project should be submitted. The planned expenditure for components like need-based activities may be deri based on the project cost.

13. A need-based EMP may be prepared in accordance with the MoEF&CC Office Memorandum vid No. 22-65/2017.IA.III dated 30.09.2020. Record of communications made in this regard with the identif intended beneficiaries (schools/ institutions etc) may also be uploaded. The activities should be compl within the first two years of the project life.

14. A study report on base flow level measured at 5 points with date and supporting photographs shoul submitted. It should be committed that mining will be done at least 1m above the base flow le Accordingly, if required, the excavation plan may also be revised.

15. Management plan including the final closure plan of haul road to be submitted.

16. Sieve analysis report for grain size distribution should be provided.

17. Study and protection plan of the aquatic life available both during the mining and non-mining seas should be provided.

While applying for environmental clearance, the PP shall upload in the PARIVESH portal, the EIA/EMP report al with the documents/ submissions/ clarifications sought hereinabove.

The West Bengal Pollution Control Board shall arrange public hearing as per EIA Notification, 2006 on submissio draft EIA/EMP prepared by the Project Proponent as per the above-mentioned ToRs. All the issues mentioned in 'Public Hearing Report' and public consultation must also be addressed and incorporated in the final EIA / EMP rep The project proponent is requested to pursue the matter with the WBPCB for organizing the public hearing/consulta on submission of the draft EIA/EMP report as per the provision of EIA notification 2006 & its amendments. The pro proponent is requested to submit the final EIA/EMP prepared as per the above-mentioned ToRs and incorporating

	the issues raised during Public Hearing / Public Consultation to the SEAC for further consideration of the proposal environmental clearance. The ToR is valid for a period of 3 (three) years from the date of issue.

Annexure - A

1.	**Annexure** **Executive Summary** The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the informa on following points: 1) Project name and location (Village, District, State, Industrial Estate (if applicable). 2) Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier E 3) Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative). 4) Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazard wastes. 5) Measures for mitigating the impact on the environment and mode of discharge or disposal. 6) Capital cost of the project, estimated time of completion. 7) Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./private land, st of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km. other industries, forest, eco-sensi zones, accessibility, (note - in case of industrial estate this information may not be necessary). 8) Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fa socio-economic condition of the nearby population. 9) Identification of hazards in handling, processing and storage of hazardous material and safety system provide mitigate the risk. 10) Likely impact of the project on air, water, land, flora-fauna and nearby population. 11) Emergency preparedness plan in case of natural or in plant emergencies. 12) Issues raised during public hearing (if applicable) and response given. 13) Environment Management Plan (EMP) as per Office Memorandum issued by the MoEF & CC vide F. No. 65/2017-IA.III dated 30.09.2020 with proposed expenditure. 14) Occupational Health Measures. 15) Post project monitoring plan.

3.10.6.2. Standard

1(a)	**Mining of minerals**
null	
1.	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA)operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
2.	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
3.	If the washery is located within the mine lease or near to the mine lease its location should be cited seperately also, providing pillar cordinates and site layout plan. Insuch cases cumulative impact of mine operation with washery to be assessd and EMP measure to be drawn to the worst scenario
4.	Plan of mechanized transportation of coal to coal washery also for rejects and washed coal to be drawn

5.	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided
6.	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines, coal washery and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also
7.	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
8.	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
9.	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need eloboration in form of lengthe, quantity and quality of water to be diverted
10.	(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
11.	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
12.	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
13.	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
14.	Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights

S.N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights(ha)	Area under Both (ha)
1	Agricultural land			

2	Forest Land			
3	Grazing Land			
4	Settlements			
5	Others (specify)			

S.N.	Details	Area (ha)
1	Buildings	
2	Infrastructure	
3	Roads	
4	Others (specify)	
	Total	

15.	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 the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km 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.
16.	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laborartory and NABET accreditation of the consultant to be provided.
17.	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
18.	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided
19.	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report.

20.	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need based survey for CSR activities to be followed.
21.	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.
22.	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
23.	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted
24.	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
25.	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
26.	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
27.	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs
28.	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of coal. The measures adopted to conserve energy or use of renewable sources shall be explored
29.	PP to evaluate the green house emission gases from the mine operation/ washery plant and corresponding carbon absorption plan.
30.	PP shall explore the use of vent gases as generated from under ground Mine for use of energy generation/ in house energy consumption
31.	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.
32.	Impact of stowing by using coal washery rejects/ flyash/ bottom ash shall be assessed in term of leachate generation and its characteristics
33.	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
34.	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.

35.	Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
36.	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
37.	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
38.	Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
39.	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
40.	Adequate greenbelt nearby areas, coal stock yard and transportaion area of coal shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route and CHP.
41.	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
42.	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
43.	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
44.	Corporate Environment Responsibility:
45.	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
46.	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.
47.	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.
48.	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.
49.	e) Environment Managament Cell and its responsibilities to be clearly spleel out in EIA/ EMP report
50.	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
5	Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and

1.	other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
52.	Status of any litigations/ court cases filed/pending on the project should be provided.
53.	PP shall submit clarification from PCCF that mine does not falls under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.
54.	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.
55.	Details on the Forest Clearance should be given as per the format given:

Total Project Area (ha)	ML Area	Total Forest land (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl For diversion of forest land
		If more than one provide details of each FC				

56.	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report
57.	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
58.	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes
59.	Detailed Chronology of the project starting from the first lease deed alloted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE 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 requisites respectively to be furnished in tabular form.
60.	A copy of application submitted for 5 star rating system to Ministry of coal for expansion cases may be provided. Certificate /rating given to project shall be provided with EIA-EMP report
61.	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET acrreditation) and Laboratory (NABL / MoEF & CC certification)
62.	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.

3.11. Agenda Item No 11:

3.11.1. Details of the proposal

Purbator Sand Mine by **SANTOSH CHOURASIA** located at **BANKURA,WEST BENGAL**