BEFORE THE HON'BIE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH AT PUNE

ORIGINAL APPLICATION NO. 30 OF 2022

In the matter of:

Gaurav Ashok Dhote ...**Applicants**

v/s

Mining Officer Nagpur & Ors. **... Respondents**

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Place: Nagpur
Date: 05/07/2022

(Ashok Kare)
Regional officer
MPCB-Nagpur

Regional Officer
M.P.C Board. Nagpur

REPORT OF COMMITTEE IN COMPLIANCE WITH ORDER OF HON'BLE NGT IN THE MATTER ORGINAL APPLICATION NO. 30 OF 2022 (WZ) TITILED GAURAV ASHOK DHOTE VS MINING OFFICER NAGPUR & ORS. RELATED TO ILLEGAL SAND MINING OPERATIONS IN NAGPUR DISTRCT

1.0 BACKGROUND-

Hon'ble NGT has passed an order dated 12.04.2022 in Original Application No.30/2022 (WZ) titled Gaurav Ashok Dhote Vs. Mining Officer Nagpur & Ors. The matter is about allegation against the District Authority of Nagpur for inviting tenders to carry-out mining activities without replenishment plan, causing damage to river ecology. The copy of the aforesaid order is provided at **Annexure-I.**

The issue raised in this Application is non-compliance of the guidelines issued in Sustainable Sand Mining Guidelines 2016 (SSMG-2016) as well as Enforcement and Monitoring Guidelines for Sand Mining, 2020 (EMGSM-2020) and not to enforce the mechanism for the preparation of DSR, Environment Management Plan, Replenishment Studies and Mines Closure Plan as envisaged in the guidelines issued as mentioned above. It is alleged that without any replenishment plan, the mining activities have been permitted by the District Authority of District Nagpur, Maharashtra by inviting tender floated on 04.02.2022 causing severe damage of the river bed and damaging the river ecology and against the Public Trust Doctrine and further in violation of the guidelines issued by the MoEF & CC from time to time.

The Hon'ble NGT has further directed for a report on the matter in issue in present application, from a Joint Committee consisting of:-

(i) One Representative from the Central Pollution Control Board (CPCB);
(ii) One Representative from the State Environment Impact Assessment Authority, Maharashtra (SEIAA);
(iii) One Representative of the Maharashtra State Pollution Control Board (MSPCB).

The Committee was directed to visit the site and submit a factual and action taken report within four weeks. The Maharashtra State Pollution Control Board (MSPCB) will be the nodal agency for coordination and logistic support.

2.0 MEETING & SITE VIST OF THE COMMITTEE

In compliance with the direction dated 12.04.2022, meeting through VC was conducted on 01.06.2022 and asked District Mining Officer to provide the information. Further, the committee comprising members- Shri Pratik Bharne, Scientist E, CPCB, Regional Directorate, Pune and Shri Bhadule, SRO-1, MPCB, Nagpur visited few Sand Ghats (*Reti Ghats*) on 30.06.2022. Shri Shriram Kadoo, District Mining Officer (DMO), Nagpur and Shri Manoj Watane, Field Officer, RO, MPCB, Nagpur were present during the visit.

Shri Pravin Meshram, Mandal Adhikari and Shri Amit Ray, Representative of Project Propoent (Shri Ayush Trivedi) were present during the visit Gosewadi Reti Ghat (A), Taluka Saoner , District Nagpur and Shri Prashant Sangale, Tahsildar, Parseoni and Shri Rirtesh Sawaithul, Talathi were present during visit at Saholi Reti Ghat (A) & (B), Parseoni, District Nagpur on 30.06.2022

3.0 OBSERVATIONS & FINDINGS

There are two rivers i.e. Kanhan River and Pench River where sand mining (reti ghats) were proposed. The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in Central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh. The Pench River is an left bank tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and flows across Pench National Park, which is a reserve for the Tiger Project of India.

3.1 **The chronology of events from Field Survey by Taluka Level Monitoring Committee (TLMC), Approval/permission for DSR, Mining Plans, Public Hearing, Environmental Clearance, Tedering/Auction, Allotment and operational status related to the Sand Ghats are provided as below-**

3.1.1 Field Survey – Taluka Level Monitoring Committee (TLMC)

- TLMC consist of Tahsildar, Deputy Engineer- Dept of water Resource, jr geologist-Directorate of geology & Mining (DGM), Jr geologist of Groundwater Survey & Development Agency (GSDA) and Representative of MPCB
- Field Survey Started on 20.10.2021 by TLMC as per letter from Additional Collector dated 18.10.2021
- TLMC surveyed 66 Sand Ghats viz 29 Sand Ghat in Saoner Taluka, 16 Sand Ghat in Parseoni, 13 Sand Ghat in Mauda Taluka and 8 Sand Ghat in Kamptee & Kuhi Taluka in Nagpur District and survey ccompleted on 15.11. 2021.
- After completion of field survey of 66 sand ghat, **only 28 sand ghats were proposed for Environmental Clearance by TLMC**. The details of 28 sand ghats are provided at **Annexure-II.**

3.1.2 District Survey Report (DSR)

- A notice was given in local newspapers on 03.11.2022 regarding availability of Draft DSR on website -https://Nagpur.nic.in for information comments/suggestions on Draft DSR for application to be made to SEAC/SEIAA for permission for sand mining. Draft DSR was published on public portal on 09.11.2021 by the Mining Department for 30 days.
- No objections/suggestions were received on the draft DSR.
- Draft DSR was finalized by Collector on 12.01.2022. The copy of Final DSR is attached as **Annexure-III.**
- Replenishment Plan for Kanhan and Pench Rivers have been included in Chapter-8 of DSR which needs to be verified by concerned departments (GSDA & DGM).

3.1.3 Mining Plans

- 28 mining plans for 28 Sand Ghats were approved by Directorate of Geology and Mining (DGM), Nagpur viz 14 sand ghats were approved on 20.12.2021 and 12 mining plans were approved on 24.12.2021 and remaining 2 were approved on 19.01.2021.

3.1.4 Public Hearing

- Public hearing documents as per the format of MPCB were submitted on 22.12.2021 to MPCB with copies of documents made available District Mining Officer, Nagpur, Gram Panchayat, Tehsildar, Talathi Office, SDO Office etc
- Public Hearing was conducted on 21.01.2022 through video conferencing and physical attendance by the stake holders at Bachat Bhawan, Collector Office, Nagpur and Minutes of Meeting were received from MPCB on 25.01.2022.

3.1.5 Environment Clearance

- Application for Environment Clearance (EC) for all 28 sand ghats were submitted on 27.01.2022 .
- State Level Expert Appraisal Committee – 1 (SEAC 1) published agenda of 217th meeting for grant of Environment Clearance including all 28 sand ghats between 17th to 18th February 2022. Second SEAC 1 220th Meeting held on 11.04.2022 and MoM of 220th meeting uploaded on Portal on 25.04.2022. SEIAA 242nd Meeting held on 27.04.2022 and MoM of 242nd meeting, uploaded on Portal on 10.05.2022
- SEIAA uploaded Environmental Clearance (EC) letter for 27 Sand Ghats in Nagpur District on 11.05.2022.

3.1.6 Auction Status-

- Out of 27 sand ghats which got EC, 18 sand ghats were already auctioned for three years in the year 2020 (2020-21, 2021-22 & 2022-23), and remaining 09 sand ghats were auctioned on 18.05.2022 for the year 2021-22, as informed. Initially the e-tendering was planned on 21.02.2022 vide public notice dated 05.02.2022. However, the date of e-auction was postponed to 18.05.2022 due to order of Hon'ble High Court (Nagpur Bench).

3.1.7 Operational Status of Sand Mining at Sand Ghats-

- Though, there is auction of 27 sand ghats (18 sand ghats in 2020 for three year & 9 sand ghats in 2022 for one year), only one sand ghat is allotted for sand mining i.e. Gosewadi- A on Kanhan River at Taluka Saoner, Dist Nagpur. It is informed the other sand ghats were not taken allotment.

The list of Sand Ghats, EC status, Auction, Allotment etc for these sand ghats are provided at **Annexure-II.**

3.2 OBSERVATIONS DURING SITE VISITS OF RETI GHATS

3.2.1 Gosewadi Reti Ghat (A), Taluka Saoner, District Nagpur.

- This sand ghat is located on right bank of Kanhan river while traversing the river from North to South direction. The details of sand ghat wrt location, dimension, (area, depth), quantity, status of EC, Auction etc is given in the Sr. No. 1 of Table at **Annexure-II.**
- The EC is obtained for the sand ghat which is attached as **Annexure – IV.**
- The sand mining for this sand ghat is allotted to M/s Ashtha Associates (Shri Ayush Trivedi) as per Allotment Letter dated 27.05.2022 and started mining from 31.05.2022 to 10.06.2022 as per Mahakhanij eTP Report as provided by DMO, Nagpur. The total excavated sand is 7420 Brass a against the allotted quantity for sand mining as per EC. The copy of the aforesaid report is attached as **Annexure-V.**
- Sand mining was found not in operation during the day of visit. The photographs. It is informed that the sand mining is not permitted from 10.06.2022 as per Sand Mining Policy 2019 which is further revised in 2022.
- As per EC, the area dimensions permitted is (length) 420 mx (Width) 100 m x (depth) 0.5m. the length of sand Mining was measured and it was observed that the sand is mined before and after the demarked pole (120 m on each side) indicating the mining carried out about Total 660 m . Further, depth of excavation at number of location is also measured and it is found that sand mining was carried out beyond 0.5 m depth as permitted. The average depth was found about 2.0 meter. It may inferred that the PP has mined excess quantity of sand. This is the violation of specific condition A SEAC no. 08, General Condition Sr No. XII. There is need to properly measure the over excavated area and excess excavated quantum of sand by the concerned departments (GSDA & DGM)
- As per EC specific condition SEAC no. 16, mining should be carried out by manual method. It is observed that mining was carried out by Poclain machine/JCB as the signs of wheels on sand & of scratches in sand pits were found, and also quantum of sand mined. It is not possible to mined 7420 brass sand in about 10 days by manual method. This is violation of EC conditions.

- As per EC Specific condition SEAC no. 11, Buffer zone was not earmarked at a distance of 10% of width of River i.e. 7.5 m. Sand mining carried out along the bank in buffer Zone, also. Red flags marking was in riverbed.
- It was observed that about 3500 Brass of sand stored on the right bank of river near approach road as informed by Tahsildar Saoner vide letter dated 01.07.2022 to DMO Nagpur. The copy of letter is provided at **Annexure-VI.**
- Register is maintained at location mentioning details of officials visited to sand ghat. However, no record of no. of vehicles which carried sand, quantity of sand excavated, details of transit pass, and weigh bridge found at the site.
- No check post at entry/exit of ghat, also there was kaccha road to sand ghat.
- Tree plantation was carried out along roadside at some places.
- It is informed that water sprinkling was carried out through water tankers.
- Piezometers wells are not provided around sand ghat and ground water quality not carried out around the sand ghat showing violation of EC conditions.
- Measures for prevention and control of soil erosion were not taken.

3.2.2 Saholi Reti Ghat (A), Taluka Parseoni, District Nagpur.

- This ghat is located on left bank of kanhan river while traversing the river from North to South direction. The details of sand ghat wrt location, dimension, (area, depth), quantity, status of EC, Auction etc is given in the Sr. No. 5 of Table at **Annexure-II.**
- The EC is obtained for the sand ghat which is attached as **Annexure – VII.**
- Sand Ghat was not operational during the visit as the ghat is auctioned but not allotted to project proponent. However, there was illgal manual excavation of sand was observed. The photographs are provided at **Annexure- VIII.**

3.2.3 Saholi Reti Ghat (B), Taluka Parseoni, District Nagpur.

- This ghat is located on left bank of kanhan river while traversing the river from North to South direction. The details of sand ghat wrt location, dimension, (area, depth), quantity, status of EC, Auction etc is given in the Sr. No. 6 of Table at **Annexure-II.**
- The EC is obtained for the sand ghat which is attached as **Annexure – IX.**
- Sand Ghat was not operational during the visit as the ghat is auctioned but not allotted to project proponent. However, there was illgal manual excavation of sand and transport as per the information fine imposed and recovered by Tahsildar Parseoni as per letter dated 30.06.2022 **(Annexure-X).**

4.0 CONCLUSION & RECOMMENDATIONS:

- There is need to properly measure the over excavated area and excess mining of sand by the concerned departments (GSDA & DGM) as it was inferred based on the observation during the visit that PP has mined sand before and after the demarked pole and the average depth was found about 2.0 meter.
- Replenishment Plan in relation with Sand Ghat - Gosewadi A at Kanhan Rivers may be checked by the concerned departments (GSDA & DGM) as per Chapter-8 of DSR.
- In view of violation of EC conditions, as enumerated in para 3.2.1 by the project proponent for Sand Ghat – Gosewadi A, SEIAA/ Env Deprt, Govt of Maharashtra may take appropriate action based on the Standard Operating Procedure (SoP) for dealing with violation cases were issued by the MoEF&CC vide Office Memorandum (OM) F. No. 22-21/2020-IA.III dated 07/07/2021 & OM F.No.22-21/2020-IA.III (138949) of MOEF&CC dated 28.01.2022.
- Collector office may take appropriate action for other sand ghats based on the information available with tahsildar of that area. As observed that illegal mining carried out at Saholi Reti Ghats.

Pratik Bharne
Sc E, CPCB, RD, Pune

A.M.Kare
RO, MPCB, Nagpur

U. B. Bhadule
SRO-I, MPCB, Nagpur

A. N. Katole
SRO-II, MPCB, Nagpur

Item No. 01 (Pune Bench)

BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE

(By Video Conferencing)

Original Application No.30/2022(WZ)

Gaurav Ashok Dhote Applicant(s)

Versus

Mining Officer Nagpur & Ors. Respondent(s)

Date of hearing: 12.04.2022.

CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. VIJAY KULKARNI, EXPERT MEMBER

Applicant(s): Mr. Sanjay Upadhyay, Advocate along with Mr. Salik Shafique, Advocate

ORDER

1. The issue raised in this Application is non-compliance of the guidelines issued in Sustainable Sand Mining Guidelines 2016 (SSMG-2016) as well as Enforcement and Monitoring Guidelines for Sand Mining, 2020 (EMGSM-2020) and not to enforce the mechanism for the preparation of DSR, Environment Management Plan, Replenishment Studies and Mines Closure Plan as envisaged in the guidelines issued as mentioned above.

2. It is alleged that without any replenishment plan, the mining activities have been permitted by the District Authority of District Nagpur, Maharashtra by inviting tender floated on 04.02.2022 causing severe damage of the river bed and damaging the river ecology and against the Public Trust Doctrine and further in violation of the guidelines issued by the MoEF & CC from time to time.

3. Issue notices to the Respondents. Returnable within four weeks.

4. Applicant is directed to provide copy of the application and relevant documents to the respondents within a week.

5. Respondents are directed to submit their reply within six weeks.

6. Applicant is also directed to take necessary steps for service to the respondents by both ways and also on available email.

7. We deem it just and proper to call a report on the matter in issue in present application, from a Joint Committee consisting of:-

(i) One Representative from the Central Pollution Control Board (CPCB);

(ii) One Representative from the State Environment Impact Assessment Authority, Maharashtra (SEIAA);

(iii) One Representative of the Maharashtra State Pollution Control Board (MSPCB).

8. The Committee is directed to visit the site and submit a factual and action taken report within four weeks. The Maharashtra State Pollution Control Board (MSPCB) will be the nodal agency for coordination and logistic support.

9. The report in the matter be filed by the Committee by e-mail at ngt-pune@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

10. Applicant is directed to supply the required documents and copy of the application to the members of the Committee within a week.

Put up with the report on 06.07.2022.

Sheo Kumar Singh, JM

Dr. Vijay Kulkarni, EM

April, 12, 2022
Original Application No.30/2022(WZ)
JG

Annexure-II

DETAILS LIST OF SAND GHATS

Sr No.	Name of Sand Ghat	Taluka	Name Of River	Adjacent Survey Number of Sand Ghat	Length (M)	Width (M)	Area (Ha)	Depth (M)	Quantity Proposed (Brass)	Quantity Excavated (Brass)	Auction (Yes/No)	EC (Yes/No)	Sand Ghat Allotment (Yes /No)
1	Gosewadi A	Saoner	Kanhan	285,286,287 part	420	100	4.20	0.50	7420	7420	Yes	Yes	Yes
2	Bawangaon B	Saoner	Kanhan	203,204,208	450	60	2.70	0.60	5724	Nil	No	No	No
3	Juni Kamptee (Gadegaon)	Parseoni	Kanhan	241/2,230	200	100	2.00	0.80	5653	Nil	Yes	Yes	No
4	Pardi k	Parseoni	Kanhan	153	450	100	4.50	0.80	12720	Nil	Yes	Yes	No
5	Saholi A	Parseoni	Kanhan	15,16,17,18,19	500	50	2.50	0.80	7067	Nil	Yes	Yes	No
6	Saholi B	Parseoni	Kanhan	115/2,112/2, 136/2,141/2	600	60	3.60	1.00	12720	Nil	Yes	Yes	No
7	Kirnapur	Mauda	Kanhan	103,104,105,107,109,110,111,113,115,116, 117,118,119,4, 5	620	80	4.96	0.80	14021	Nil	Yes	Yes	No
8	Mohkhedi	Mauda	Kanhan	117,118,119	490	100	4.9	0.70	12120	Nil	Yes	Yes	No
9	Neeri Ghat	Kampthe	Kanhan	217/2/3,219,220,221/1/2,223,224/1 Part	565	86	4.85	1.50	25754	Nil	Yes	Yes	No
10	Chichghat	Kuhi	Kanhan	43 area2.08 ha	300	100	3.00	0.50	5300	Nil	Yes	Yes	No
11	Wakodi	Saoner	Kanhan	44part	500	70	3.50	0.40	4946	Nil	Yes	Yes	No
12	Raywadi A	Saoner	Kanhan	179,180,183, 184,186,185 &188 part	450	75	3.37	0.40	4770	Nil	Yes	Yes	No
13	Rohana	Saoner	Kanhan	168,3part 7B part	350	60	2.10	0.50	3710	Nil	Yes	Yes	No
14	Esapur A	Saoner	Kanhan	90part, 93,94,115,116	475	80	3.8	0.45	6042	Nil	Yes	Yes	No

15	Karajghat	Saoner	Kanhan	15part	470	75	3.52	0.40	4982	Nil	Yes	Yes	No
16	Bawangaon A	Saoner	Kanhan	252,253	243	80	1.94	0.40	2747	Nil	Yes	Yes	No
17	Ramagongri B	Saoner	Kanhan	144part, 143 Part	400	100	4.0	0.30	4240	Nil	Yes	Yes	No
18	Ghatrohana	Parseoni	Pench	Part53,52,46 ,45 Part	500	60	3.00	0.40	4240	Nil	Yes	Yes	No
19	Sihora	Parseoni	Kanhan	170/1,170/2 part	500	90	4.50	0.30	4770	Nil	Yes	Yes	No
20	Old Waghoda	Parseoni	Pench	127/1 part	334	120	4.0	0.90	12746	Nil	Yes	Yes	No
21	Yesamba	Parseoni	Pench	207 part	210	75	1.57	0.90	5008	Nil	Yes	Yes	No
22	Garanda	Parseoni	Pench	104 part	400	80	3.20	0.70	7915	Nil	Yes	Yes	No
23	Pipla	Parseoni	Pench	354 part,353 part	215	90	1.93	0.40	2734	Nil	Yes	Yes	No
24	Palora B	Parseoni	Pench	43 part	250	80	2.00.	0.40	2826	Nil	Yes	Yes	No
25	Singardip	Parseoni	Kanhan	80,81,82	550	80	4.40	0.30	4664	Nil	Yes	Yes	No
26	Chiknaghat	Mauda	Kanhan	543/1,542,541,543/2	540	90	4.86	0.60	10303	Nil	Yes	Yes	No
27	Chikna A	Kamptha	Kanhan	8,9/1,9/2,10/1,10/2,11,12 part	450	50	2.25	0.50	3975	Nil	Yes	Yes	No
28	Ungaon	Kamptha	Kanhan	212,217,218, 219,222,211 part	650	74	4.81	0.30	5098	Nil	Yes	Yes	No

DISTRICT SURVERY REPORT

Riverbed Sand Mining and other Minor Minerals




(As per Ministry of Environment, Forest and Climate Change, G.O.I. New Delhi; Notification No. S.O. 3611 (E) 25th July, 2018 and As per Enforcement and Monitoring Guidelines for Sand Mining, 2020, MoEF & CC-New Delhi)

District Collector,
Nagpur.

2021-2022

Revenue & Forest Department
Office of the District Collector, Nagpur
Civil Lines, Nagpur 440 001
Email Id: dmonagpur1@gmail.com

Certificate

This is to certify that the District Survey Report for proposed Sand Ghats and Minor Minerals in Nagpur District has been prepared by Environmental Consultant M/s Open Arch Design & Enviro Solutions LLP, Mumbai, and the same was published on the website www.nagpur.nic.in on 09/11/2021 for public information to obtain feedback, objections and suggestions regarding sand auction till 08/12/2021. During this period this office has not received any objections or suggestion in the District Survey Report till date.

Nagpur
Dated - 12/01/22

OFFICE OF THE DISTRICT COLLECTOR * NAGPUR *

Collector, Nagpur

12/1/2021

CERTIFICATE

This is to certify that the District Survey Report is prepared in compliance to the notification issued by the Ministry of Environment and Forest and Climate Change, dated 25/07/2018 and Enforcement and Monitoring Guidelines for Sand Mining, 2020.

Every effort have been made to incorporate all accepts of the notifications. The sand mining location and other mining activity areas and overview of mining activity in the district with all its relevant features to geology and mineral wealth in replenishable and non- replenishable areas of rivers, stream and other sand sources.

This report will be a model and guiding document which is a compendium of available mineral resources, geographical set up, environmental and ecological set up of the district and is based on data of various departments, published report and e-source. The District survey Report will form the basis for application for environmental clearance, preparation of reports and appraisal of projects.

District Collector,
Nagpur

12/1/202

Chapter 1
INTRODUCTION

1.1 District Nagpur

Nagpur District is a District in the Vidarbha region of Maharashtra state in central India. The city of Nagpur is the district headquarters. The district is part of Nagpur Division. In 1853, after the death of Raghoji III, the princely state of Nagpur was annexed by the British and the territory occupied by the present district became part of Nagpur Province. In 1861, it was merged with the Central Provinces and Nagpur district became a part of one of its divisions,Nagpur division. In 1903, it became part of the Central Provinces and Berar. In 1950, Nagpur district became part of the newly formed Madhya Pradesh state and Nagpur became its capital. In 1956, after the reorganisation of states, Nagpur district was incorporated in Bombay state. On 1 May 1960, it became a district of Maharashtra state.

Nagpur district is bounded by Bhandara Districton the east,Chandrapur Districton the southeast, Wardha Districton the southwest,Amravati Districton the northwest and Chhindwara District of Madhya Pradesh state on the north. Nagpur city is the winter capital of the state of Maharashtra, with a population of 2,405,421. It has also recently been ranked as the cleanest city and the second greenest city of India. In addition to being the seat of annual winter session of Maharashtra state assembly "Vidhan Sabha", Nagpur is also a major commercial and political centre of the Vidarbha region of Maharashtra.

1.2 History

The city was founded by the Gonds but later became part of the Maratha Empire under the Bhonsles. The British East India Company took over Nagpur in the 19th century and made it the capital of the Central Provinces and Berar. After the first reorganization of states, the city lost its capital status but according to the "Nagpur Pact" between political leaders it was made the second capital of Maharashtra.

Figure 1.The Zero Mile Stone, landmark denoting geographical centre of India

Nagpur is also called. "Tiger Capital of India" as it connects many Tiger Reserves in India to the world. It is among the important cities for IT sector in Maharashtra after Pune, Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India.

Princely states are shown in yellow. The Nag River, a tributary of the Kanhan River, flows in a serpentine path and is therefore named "Nag", the Marathi word for snake. And hence, the river and city is named as Nagpur, While others says that the river flows through the old city of Nagpur and hence the city is named after this river. "Pur" is a common suffix given to cities, villages and towns across India, and is often simply translated "city" The seal of Nagpur Municipal Corporation depicts a cobra in the water of a river.

Human existence around present day Nagpur city can be traced back 3000 years to 8th century BC. Mehir burial sites at Drugdhamna (near Mhada colony) indicate megalithic culture existed around Nagpur and is still followed in present times. The first reference to the name Nagpur is found in a 10th century copper-plate inscription discovered at Devali in the neighbouring Wardha district. The inscription is a record of grant of a village situated in the visaya (district) of Nagpura - Nandivardhana during time of Rastrakuta king Krsna III in the Saka year 862 (940 CE). Towards the end of third century King Vakataka dynasty. Vindhyasakti is known to have ruled the Nagpur region. In the 4th century Vakataka Dynasty ruled over the Nagpur region and surrounding areas and had good relations with the Gupta Empire. The Vakataka king Prithvisena I moved his capital to Nagardhan (ancient name Nandivardhana), located at 28 kilometres (17 mi) from Nagpur. After the Vakatakas, the region came under the rule of the Hindu kingdoms of the Badami Chalukyas, the Rashtrakutas, and finally the Yadavas. In AD 1296 Allauddin Khilji invaded the Yadava Kingdom after capturing Deogiri, after which the Tughlaq Dynasty came to power in 1317.

In the 17th century, the Mughal Empire conquered the region. However, regional administration was carried out by the Gond kingdom of Deogarh- Nagpur in the Chhindwara district of the modern-day state of Madhya Pradesh.

Recent history ascribes the founding of Nagpur to Bakht Buland, a prince of the kingdom of Deogarh-Nagpur. The next Rajs of Deogarh was Chand Sultan, who resided principally in the country below the hills, fixing his capital at Nagpur which he made a walled town. On Chand Sultan's death in 1739, Wali Shah, an illegitimate son of Bakht Buland, usurped the throne and Chand Sultan's widow invoked the aid of the Maratha leader Raghuji Bhonsle of Berar in the interest of her sons Akbar Shah and Burhan Shah The usurper was put to death and the rightful heirs placed on the throne. After 1743, a series of Maratha ralers came to power, starting with Raghoji Bhonsle, who conquered the territories of Deogarh, Chanda and Chhattisgarh by 1751.

In 1803 Raghoji II joined the Peshwa against the British in the Second Anglo-Maratha War, but the British prevailed. After Raghoji II's death in 1816, his son Parsaji was deposed

and murdered by Mudhoji II. Despite the fact that he had entered into a treaty with the British in the same year, Mudhoji joined the Peshwa in the Third Anglo-Maratha War in 1817 against the British, but suffered a defeat at Sitabuldi in present-day Nagpur city. The fierce battle was a turning point as it laid the foundations of the downfall of the Bhonsles and paved the way for the British acquisition of Nagpur city. Mudhoji was deposed after a temporary restoration to the throne, after which the British placed Raghoji III the grandchild of Raghoji II, on the throne. During the rule of Raghoji III (which lasted till 1840), the region was administered by a British resident. In 1853, the British took control of Nagpur after Raghoji III died without leaving an heir.

From 1853 to 1861, the Nagpur Province (which consisted of the present Nagpur region, Chhindwara, and Chhatisgarh) became part of the Central Provinces and Berar and came under the administration of a commissioner under the British central government, with Nagpur as its capital. Berar was added in 1903. Tata group started the country's first textile mill at Nagpur, formally known as Central India Spinning and Weaving Company Ltd. The company was popularly known as "Empress Mills" as it was inaugurated on 1 January 1877, the day queen Victoria was proclaimed Empress of India.

The Non-cooperation movement was launched in the Nagpur session of 1920. After Indian Independence in 1947, Central Provinces and Berar became a province of India, and in 1950 became the Indian state of Madhya Pradesh, again with Nagpur as its capital However, when the Indian states were reorganised along the linguistic lines in 1956, Nagpur and Berar regions were transferred to Bombay state, which in 1960 was split between the states of Maharashtra and Gujarat.

At a formal public ceremony on 14 October 1956 in Nagpur B. R. Ambedkar along with his supporters converted to Buddhism starting Dalit Buddhist movement which is still active. Nagpur is a city with great capabilities to grow and prosper in the coming days. It is very important for State and Central Governments to contribute to the growth, development, prosperity of Nagpur. Nagpur completed 300 years of establishment in the year 2002. A big celebration was organized to mark the event.

1.3 Location and Geographical data:

Nagpur is located in central India in the eastern part of Maharashtra state betwem 20°35" north to 21 44" north latitudes and 78 15 cast to 79°40 east longitudes. Nagpur is bordered by Amravati and Wardha in the west, Bhandara in the cast and Chandrapur in the south. In the north, it shares its boundary with the state of Madhya Pradesh.

It falls in parts of the Survey of India Toposheet Nos. 55 K/7, 55 K/8, 55 K/11, 55 K/12, 55 K/15, 55 K/16, 55 L/13, 55 0/2, 55 0/3, 55 0/4, 55 0/6, 55 0/7, 55 0/8, 55 0/10, 55 0/11, 55 0/12, 55 P/1, 55 P/2, 55 P/5, 55 P/6, 55 P/9. The general elevation of the District ranges between 150 to 600 m AMSL.The terraced landscape of the Deccan lava on the west appear as several flat topped hills well furrowed by streams.

The upland ridges in the north are an extension of the ranges of the Satpura hills and the eastern and south eastern part exhibit an apparently featureless tract with scattered isolated hillocks

1.4 Administrative set up

The Nagpur District is divided into 7 sub divisions, i.e Nagpur (City) Nagpur (Rural), Umred, Ramtek, Mouda, Saoner, and Katol, which are further divided into 14 Tehsils, given in Table 1.1 and tehsil map is illustrated in Fig 1.3. The Nagpur is the district's headquarter.

Sr No.	Subdivision	Tehsil
1	Nagpur(City)	Nagpur City
2	Nagpur(Rural)	Nagpur (Rural),Hingna
3	Umrer	Umrer,Bhiwapur,Kuhi
4	Ramtek	Ramtek,Parseoni
5	Mauda	Mauda, Kamptee
6	Saoner	Saoner, Kalmeshwar,
7	Katol	Katol, Narkhed

Table- 1.1 Administrative Units of the Dsitrict

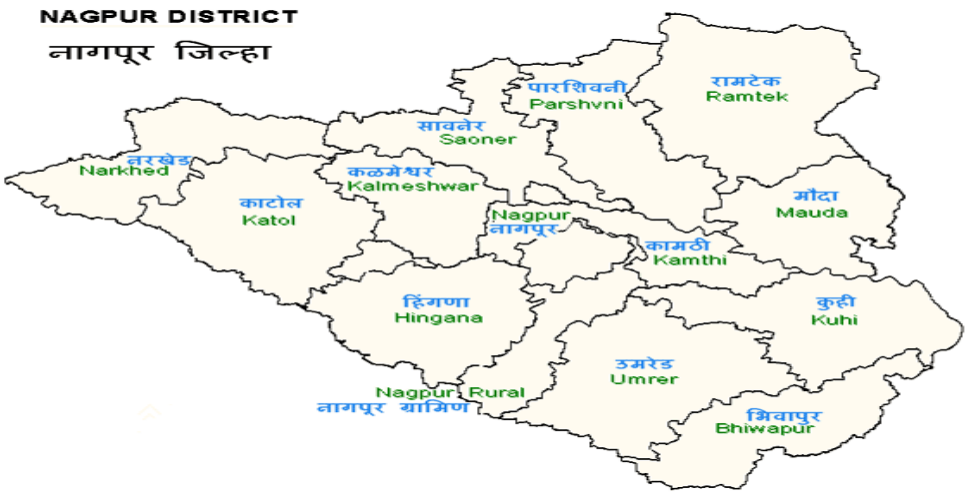


Fig 1.3 Tehsil Map of the District

1.5 Demography:

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171.and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932.. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76% and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census

1.6 Basin/ Sub Basin:

The district falls in the Godavari Basin which is further divided into Kanhan sub basin. and Pench Sub basin which is drained in the south. Important Rivers of the district are Kanhan, Pench, Nag, Kolar, Pur, Wainganga and Wardha.

CHAPTER 2
OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is moderately rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee apart from the high grade coal found in Umred tahsil.

Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	No of Mines
1	Manganese Ore	37
2	Coal	15
3	Dolomite	7
4	White Clay	02
5	Quartz	02
6	Sand (Stowing)	04
7	Stone Quarry	132

Table 2: **Mineral production in Nagpur district**

The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 16-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 17-18. The details of royalty collected from minor mineral from 2015-2016 to 2020-21 are given in the Chapter 5. The quantity of minor mineral consumption is a thermometer to assess the quantity of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for

construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope. The 8 local residents used to lift gravel etc. from the river beds to meet out their bonafide requirement. However after coming into being the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, and Revised sand Mining Policy dated 03/09/2019 for sand mining projects as the mining was allowed in accordance to the rules.

Main Objectives of Sustainable Sand Mining:

- To ensure that sand and gravel mining is done in environmentally sustainable and sociallyresponsiblemanner.
- To ensure availability of adequate quantity of aggregate insustainablemanner.
- To improve the effectiveness of monitoring of mining and transportation of minedoutmaterial.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecologicalsystem.
- Avoid aggradations at the downstream reach especially those with hydraulic structures such as jetties, waterintakesetc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and instreamhabitats.
- Avoid pollution of river water leading to waterqualitydeterioration.
- To prevent depletion of ground water reserves due to excessive draining out of groundwater.

CHAPTER 3
THE LIST OF SAND MINING LEASES IN THE DISTRICT WITH LOCATION, AREA AND PERIOD OF VALIDITY

Details of the Sand mining leases in the district are as follows**.**

Table No.1 List of Sand Ghats Proposed / auctioned in the year 2016-2017

Sand Ghat Name	Taluka	Survey No.	Area in Hector	Availabl e Brass	Upset Price
Waregaon 2	Kampte e	204 ,3 part	3.00 hec	10601	5820000
Khairi Panjab Nalla 2	Mauda	1 adjoining and 4 part	2.25 hec	3975	1590000
Saholi B	Parseon i	136/2,141/2,1116/2,115/2,113/2,112/2, 110/2	4.16 hec	14700	1330400 0
Walni	Saoner	8 part,9,10 Adjoining	3.60 hec	6360	8733000
Kodamend i	Mauda	115,116 Adjoining	0.30 hec	530	262000
Khedikhur d	Narkhe d	15,16,18,19,20/1,20/2,3,4,5/1,5/2,6/1,6/2, 7,8 part	2.00 hec	7067	2827000
Bawangao n D	Saoner	208,204 Adjacent 203 some part	3.60 hec	12721	7544000
Palora A	Parseon i	150part	2.47 hec	4373	2440134
Mahalgaon	Mauda	260part	4.50 hec	7950	4389000
Naygaon Thakre	Narkhe d	103part	1.87he c	3313	1326000
Thadipauni	Narkhe d	80	0.80 hec	2845	1138000
Moregaon	Mauda	22,23adjoining	1.82 hec.	3216	1293000
Saholi A	Parseon i	15,16,17,18,19,20,21	4.80 hec.	8481	8828721
Wagoda	Saoner	127/1 Adjoining Some Part	4.68 hec	24837	1199627 1
Pardi	Parseon i	135,138 part	4.00 hec	7067	7258000
Ramdondri A	Saoner	144, 143 part	5.00 hec	8834	1213000 0
Umri Ja Nalla	Saoner	89,91,94part	3.71 hec	6555	2622000
Karajghat	Saoner	15 Adjacent	4.00 hec	14134	8382000
Wadna	Mauda	53,54part 55 part 52	3.02 hec	10689	4319000
Sihora	Parseon i	169, 142 part	2hec	3534	2736000

Bhamewada B	Kamptee	old 115 new 124Adjacent	1.35 hec	2385	
Indora A	Mauda	159 and 165/2 Adjacent	0.39 hec	689	277000
Bawangaon A	Saoner	254,253,251, 252	3.5 hec	12367	5500500
Wakodi B	Mauda	44 part	2 hec	7067	9703000
Mohadi	Mauda	89,90part	0.36 hec	636	257000
Gowari	Mauda	63/2, 69 and 79 some part	0.36 hec	636	257000
Nandapur	Saoner	220,221,237, 238	3.85 hec	13604	8067172
Itgaon	Parseoni	420 some part 421 and 422	2.24 hec	3958	4674398
Khairi Panjab Nalla 1	Saoner	5,6,14 part	0.75 hec	1325	530000
Chichghat	Kuhi	46 Adjoining	3 hec	5300	2120000
Sirsoli	Mauda	10,11part	2.34 hec	4134	1435532

Table No.2 List of sand ghat proposed in 2017-2018

Sr. No.	Name of Sand Ghat	Tehsil	Name of River / Nalas	Gut number on the river bank near the sand Ghat	Area (Hector)	Available Sand (Brass)	Upset price
1	2	3	4	5	6	7	8
1	Rohna	Saoner	Kanhan River	168	2.80	4947	7267150
2	Dahegaon RA	Saoner	Kolar River	243	1.25	2208	3243560
3	Esapur -A	Saoner	Kanhan River	92, 91,93,94,115 adjacent part	3.60	12720	18685680
4	Randongri-A	Saoner	Kanhan River	30,31,32,and 33 Excluding the adjacent part	3.15	11130	23539950
5	Kairi Panjab Nalah -A	Saoner	Kairi Panjab Nalah	17,18 adjacent part	0.40	706	955800
6	Khapapeth	Saoner	Kanhan River	The northern part of 284 up to 500 meters	4.0	14134	10982120
7	Gosevadi-A	Saoner	Kanhan River	2572,85,286	4.80	8480	12457120
8	Kochhi	Saoner	Kanhan River	2632,64,267	4.50	7950	4603050
9	Vaki-A	Saoner	Kanhan River	180,181,182Part	4.05	7155	9823820
10	Temburdoh-A	Saoner	Kanhan River	260,274,279 adjacent part	3.20	11308	6705650

11	Temburdoh-B	Saoner	Kanhan River	2502,40,239	3.20	11308	6705650
12	Pardi-B	Parshivani	Kanhan River	144,142 / 5 to 142/9 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
13	Pardi-C	Parshivani	Kanhan River	146, 148, 153, 157 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
14	Pipla	Parshivani	Pench River	353/1,353/2,354	1.89	3339	1863170
15	Bakhari	Parshivani	Pench River	188,189,190 (excluding 100 meters distance of municipal supply well and bridge)	1.93	3418	1907250
16	Palora-B	Parshivani	Pench River	43/1,43/2,45/1	1.75	3092	1725340
17	Sonegaon (Raja)-No.2B	Kamptee	Kanhan River	341 Part,342,345	3.75	13250	13223500
18	Neri Ghat No.2A	Kamptee	Kanhan River	217,219,220,221, 223and 224 Part	5	8833	8815340
19	Neri Ghat No.2B	Kamptee	Kanhan River	224 Part 230,227,229	5	8833	8815340
20	Ungaon Ghat No.2A	Kamptee	Kanhan River	206, 208, 211, 212 Part	4.5	7950	7934100
21	Ungaon Ghat No.2B	Kamptee	Kanhan River	212 Part, 217,218,219	4.5	7950	7934100
						157545	167523470

- In the year 2018-2019 auctions of sand ghat were not carried out due to PIL67/2017 in High Court, Nagpur

Table No.3 List of Sand ghat proposed for the year 2018-2019

Sr No	Name of Sand Ghat	Tahsil	Name of River/Nallas	Nearest Sr No.	Depth	Length in Meter	Width in Meter	Area in Hector	Quantity in Brass
1	Temburdoh-A	Saoner	Kanhan	260,274,279Adjoining	0.5	400	80	3.2	5654
2	Temburdoh-B	Saoner	Kanhan	239Part,240,250Part	1	400	80	3.2	11307
3	Walni	Saoner	Kanhan	9,8,10Part and 276 survey no. of river	0.3	400	80	3.2	3392
4	Ramdongri A	Saoner	Kanhan	31,32,30	0.9	450	70	3.15	10018
5	Ramdongri B	Saoner	Kanhan	143,144 part	0.5	400	100	4	7076

6	Ramdongri k	Saoner	Kanhan	140,135 part	0.5	400	70	2.8	4947
7	Badegaon	Saoner	Kanhan	431,433,435,436,437 Adjoining	0.75	500	90	4.5	11926
8	Khapapeth	Saoner	Kanhan	The northern part of 284 adjoins up to 500 m	0.60	500	80	4.00	8481
9	Khairi Panjab	Saoner	Khairi Panjab	18 Some part of 19 adjacent	0.40	200	20	0.40	565
10	Wakodi	Saoner	Kanhan	44 Adjoining	0.40	500	90	4.50	6360
11	Gosewadi A	Saoner	Kanhan	285,286,287 Adjoining	0.60	480	100	4.80	10177
12	Gosewadi B	Saoner	Kanhan	254,253 Adjoining	0.50	320	75	2.40	4240
13	Nandapur	Saoner	Kanhan	220 Adjoining	0.40	475	80	3.80	5371
14	Esapur A	Saoner	Kanhan	91 some part 93,94,115 in adjacent river basin Survey.No.92	0.40	450	80	3.60	5088
15	Esapur B	Saoner	Kanhan	85,87 in the adjacent river basin,Survey.No.92	0.85	300	80	2.40	7208
16	Rohana	Saoner	Kanhan	129,132 degrees in the adjacent river basin, Surevy no.168	0.75	350	80	2.10	7420
17	Dahegaon Rangari B	Saoner	Kanhan	211,212,214 Nearby and river basin Surevy.No.244	0.40	300	40	1.20	1696
18	Waki A	Saoner	Kanhan	180,181,182 Adjoining	0.40	450	90	4.05	5724
19	Waki B	Saoner	Kanhan	189, 190, 191 Adjoining	0.50	350	80	2.80	4947
20	Raiwadi	Saoner	Kanhan	185,183,180,179 व 188 Adjoining (Survey no..171 and 190 Excluding)	0.60	450	75	3.37	7155
21	Ungaon	Kamptee	Kanhan	222,219,218,217,212 ,211 Adjoining	0.40	650	74	4.81	6799
22	Waregaon A	Kamptee	Kolar	204 and 3 Adjacent	1.00	350	50	1.75	6184
23	Waregaon B	Kamptee	Kolar	10/1, 10/2, 13/1, 13/2, Adjoining	0.60	550	58	3.19	6763
24	Bina	Kamptee	Kanhan	56,57,53/अ/1 ,58 Adjoining	0.40	830	60	4.98	7039
25	Sonegaon Raja	Kamptee	Kanhan	338,339, 337Adjoining	1.00	752	65	4.88	17272
26	Chikna	Kamptee	Kanhan	7 some part 8, 9, 10, 11 and 12 some part	1.00	450	40	1.8	6360
27	Neri	Kamptee	Kanhan	217 some part 219, 220, 221, 223 and 224/1 some part	1.00	565	86	4.85	17170
28	Bhamewada	Kamptee	Kanhan	128 some part, 144 some	0.80	600	30	1.8	5088

				part,135/2,136/2,129 Adjacent					
29	Nayakund	Parseoni	Pench River	33 and 26 Adjoining	0.40	200	100	2.00	2827
30	Pardi K	Parseoni	Kanhan	153 Adjoining	0.50	250	100	2.50	4417
31	Wagoda	Parseoni	Pench River	127/1 Adjoining	0.50	334	120	4.00	7081
32	Ghatrohana	Parseoni	Pench River	54 Some part 148 Adjoining	0.40	300	100	3.00	4240
33	Yesamba	Parseoni	Pench River	207 Adjoining	0.80	304.5	36	1.09	3099
34	Sihora	Parseoni	Kanhan	170/1,170/2 Some part 170/3,170/4 Adjacent	0.50	200	90	1.80	3180
35	Palora A	Parseoni	Pench River	150 Adjoining	0.40	200	50	1.00	1413
36	Pimpla	Parseoni	Pench River	353 Adjacent 354 Adjoining	0.50	215	90	1.93	3419
37	Chichghat	Kuhi	Kanhan	45 Adjoining	0.80	200	100	2.00	5654
38	Khedikhurd A	Narkhed	Wardha	3,4,5,6,7,8,15,16 Adjacent	0.40	750	25	1.87	2650
39	Khedikhurd B	Narkhed	Wardha	155,157,168,169 Adjoining	0.40	1150	25	2.87	4064
40	चिकना घाट	Mauda	Kanhan	532 some part 541,542 Adjacent	0.50	550	90	4.95	8746
41	Mohkhedi A	Mauda	Kanhan	117,118 Adjoining	0.90	490	100	4.9	15583
42	Mohkhedi B	Mauda	Kanhan	132,133,135,136 Adjoining	0.50	490	100	4.9	8657
43	Mahalgaon A	Mauda	Sur	Some parts of Survey No. 6 & 260 and Survey No. 23,24,25,26,261 in front of Mauja Pipalgaon	0.50	380	60	2.28	4028
44	Mahalgaon B	Mauda	Sur	385,386,387,389 Adjoining	0.50	275	70	1.92	3401
45	Sirsoli	Mauda	Sur	188 Adjoining	0.40	170	75	1.27	1802
46	Kirnapur	Mauda	Kanhan	109, 110, 111, 107, 105, 104,103 Adjacent	1.00	620	80	4.96	17527
47	Wakeshwar	Mauda	Sur	16 Adjacent 17 Adjacent	0.40	150	30	0.45	636
48	Belda	Ramket	Kundiya Nalla	180 Adjoining	0.40	300	25	2.27	1060

Table No.4 List of Sand ghat propsed for the year 2019-2020

- **In the year 2019-2020 Sand ghats were not auctioned because of PIL 11/208**

Table No.4 List of Sand ghat propsed for the year 2020-2021

List of in the district 26 Sand Ghats were finalized for the auction in 2020-2021. The details of there are as follows:

SR No.	Name of Sand Ghat	Taluka	Name of River	Adjacent Survey number to Sand ghat	Length (Meter)	Width (Meter)	Area (Hector)	Extractable depth (Meter)	Availabe Quantity (Brass)
1.	Raiwadi-A	Savner	Kanhan	179, 180, 183, 184, 186	450	75	3.37	0.40	4770
2.	Temburdoh	Savner	Kanhan	1(Part), 279, near gavthan	425	75	3.18	0.80	9011
3.	Wakodi	Savner	Kanhan	44 (Part)	500	70	3.35	0.80	9894
4.	Ramdongari-B	Savner	Kanhan	143 (Part),144 (Part)	400	100	4.00	0.30	4240
5.	Khapapeth	Savner	Kanhan	284 North part 500 m	500	75	3.75	0.40	5300
6.	Karajghat	Savner	Kanhan	15 (Part)	470	75	3.52	0.80	9965
7.	Isapur-A	Savner	Kanhan	90 (Part)93,94, 115, 116	475	80	3.80	0.60	8057
8.	Rohana	Savner	Kanhan	168, 3 (Part)7 B(Part)	350	60	2.10	0.60	4452
9.	Bawangaon-A	Savner	Kanhan	252, 253	243	80	1.94	0.50	3435
10.	Ghatrohana	Parshivani	Pench	53 (Part), 52, 46, 45 (Part)	500	60	3.00	0.80	8481
11.	Paradi	Parshivani	Kanhan	153, 157	740	90	6.66	0.50	11767
12.	Sinagdeep	Parshivani	Kanhan	80, 81, 82	550	80	4.40	0.50	7774
13.	Palora	Parshivani	Pench	43 (Part)	250	80	2.00	0.50	3534
14.	Pipla	Parshivani	Pench	354 (Part), 353 (Part)	215	90	1.93	0.50	3419

15.	Sihora	Parshivani	Kanhan	170/1,170/2 (Part)	500	90	4.50	0.50	7951
16.	Waghoda	Parshivani	Pench	127/1 (Part)	334	120	4.00	1.00	14163
17.	Yesamba	Parshivani	Pench	207 (Part)	210	75	1.57	2.00	11131
18.	Garanda	Parshivani	Pench	104 (Part)	400	80	3.20	1.50	16961
19.	Bina	Kamptee	Kanhan	57/1, 57/2, 56,53/A1	500	100	5.00	0.50	8834
20.	Sonegaon Raja	Kamptee	Kanhan	338, 339, 337(Part)	752	65	4.88	0.50	8636
21.	Ungaon	Kamptee	Kanhan	212, 217, 218, 219, 222, 211 (Part)	650	74	4.81	0.50	8498
22.	Chikna-A	Kamptee	Kanhan	8, 9/1, 9/2, 10/1, 10/2, 11, 12 (Part)	450	50	2.25	1.00	7951
23.	Chichghat	Kuhi	Kanhan	45 part	450	90	4.05	0.80	11449
24.	Chiknaghat	Mouda	Kanhan	543/1,542,541,543/2	540	90	4.86	1.50	25760
25.	Mohkhedi	Mouda	Kanhan	117, 118, 119	750	100	7.5	1.00	26502
26.	Kirnapur	Mouda	Kanhan	109,110,111 ,107,106,105,113,115,116,118,119, 4,5	850	80	6.8	0.8	19223

Table No.5 List of Sand Ghats proposed for the year 2021-2022

Sr No.	Name of Sand Ghat	Taluka	Name Of River	Adjacent Survey Number of Sand Ghat	Length (Meter)	Width (Meter)	Area (Hector)	Depth	Brass
1	Gosewadi A	Saoner	Kanhan	285,286,287 part	420	100	4.20	0.50	7420
2	Bawangaon B	Saoner	Kanhan	203,204,208	450	60	2.70	0.60	5724
3	JuniKamptee(Gadegaon)	Parseoni	Kanhan	241/2,230	200	100	2.00	0.80	5653
4	Pardi k	Parseoni	Kanhan	153	450	100	4.50	0.80	12720

5	Saholi A	Parseoni	Kanhan	15,16,17,18,19	500	50	2.50	0.80	7067
6	Saholi B	Parseoni	Kanhan	115/2,112/2,136/2,141/2	600	60	3.60	1.00	12720
7	Kirnapur	Mauda	Kanhan	103,104,105,107,109,110,111,113,115,116,117,118,119,4,5	620	80	4.95	0.80	14021
8	Mohkhedi	Mauda	Kanhan	117,118,119	490	100	4.9	0.70	12120
9	Neeri Ghat	Kampthe	Kanhan	217/2/3,219,220,221/1/2,223,224/1 Part	565	86	4.85	1.50	25754
10	Chichghat	Kuhi	Kanhan	43 area2.08 ha	300	100	3.00	0.50	5300
11	Wakodi	Saoner	Kanhan	44part	500	70	3.50	0.40	4946
12	Raywadi A	Saoner	Kanhan	179,180,183,184,186,185 &188 part	450	75	3.37	0.40	4770
13	Rohana	Saoner	Kanhan	168,3part 7B part	350	60	2.10	0.50	3710
14	Esapur A	Saoner	Kanhan	90part, 93,94,115,116	475	80	3.8	0.45	6042
15	Karajghat	Saoner	Kanhan	15part	470	75	3.52	0.40	4982
16	Bawangaon A	Saoner	Kanhan	252,253	243	80	1.94	0.40	2747
17	Ramagongri B	Saoner	Kanhan	144part, 143 Part	400	100	4.0	0.30	4240
18	Ghatrohana	Parseoni	Pench	Part53,52,46,45 Part	500	60	3.00	0.40	4240
19	Sihora	Parseoni	Kanhan	170/1,170/2 part	500	90	4.50	0.30	4770
20	Old Waghoda	Parseoni	Pench	127/1 part	334	120	4.0	0.90	12746
21	Yesamba	Parseoni	Pench	207 part	210	75	1.57	0.90	5008
22	Garanda	Parseoni	Pench	104 part	400	80	3.20	0.70	7915
23	Pipla	Parseoni	Pench	354 part,353 part	215	90	1.93	0.40	2734

24	Palora B	Parseoni	Pench	43 part	250	80	2.00.	0.40	2826
25	Singardip	Parseoni	Kanhan	80,81,82	550	80	4.40	0.30	4664
26	Chiknaghat	Mauda	Kanhan	543/1,542,541,543/2	540	90	4.86	0.60	10303
27	Chikna A	Kampthe	Kanhan	8,9/1,9/2,10/1,10/2,11,12 part	450	50	2.25	0.50	3975
28	Ungaon	Kampthe	Kanhan	212,217,218,219,222,211 part	650	74	4.81	0.30	5098

CHAPTER 4

DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected from Minor mineral are as follows**.**

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2021-2022 (till Dec 2021)	20978.00	10148.71
2	2020-2021	20700.00	18329.59
3	2019-2020	12575.16	4861.13
4	2018-2019	15067.87	57709.07
5	2017-2018	13500.00	44601.00
6	2016-2017	9300.00	31100.00
7	2015-2016	7200.00	27000.00

Table-4.1: Details of royalty collected

CHAPTER 5
DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Sr. no.	Year	Minor Mineral (Brass)
1	2021-2022(Till Dec 2021)	2004550
2	2020-2021	481887
3	2019-2020	367087
4	2018-2019	3766967
5	2017-2018	6142500
6	2016-2017	3389750
7	2015-2016	2275200

Table 5.1: Details of production of minor mineral

i) Demand Supply Analysis:

In the year 2020-2021 total nearly 1, 05,651 brass of sand excavated from auctioned sand ghats, excavated quantity met marginally with demand of sand in the district. Along with the several other uses of sand, continuous stream of developing infrastructure also triggers the rapid and generous demand of sand. To fulfill this ever-increasing demand and consumption needs to increase the quanity of extraction of sand. So, for the upcoming season proposed quantity of sand 276215 Brass.

Also, it will ensure that all the policies and rules regarding sustainable sand mining will befollowed rigorously.

RBI Index based methodology for Demand:

(Source- Sand Mining Framework-2018)

Demand of sand in the District for has been estimated based on the following factor:

Conversion factor- Normative cement to sand mixture ratio of 1:2.5

In this method, per capita cement consumption is used to calculate demand of sand. Once cement consumption of the District is known, the same is multiplied by the factor of 2.5 to derive the sand consumption.

1. Per capita cement consumption of India 195 Kg (Source: BEE's website:https://beeindia.gov.in/)
2. Total Population of District* 195 = Total cement Consumption

   46,53,570 * 195 = 90,74,46,150 kg

   = 907446.15 Metric Tonnes

3. Sand Demand of the District: Total cement Consumption * 2.5 = 907446.15251

   =**22, 68,615 Metric tonnes of sand**

From above calculation it seems that total demand of the district is very high as compared to supply or production of sand in Proposed Sand Ghat Mining 2021-22, as total sand excavation will be 204215 brass from 28 sand spots. This huge gap will be fulfilled by procuring of sand from other district or suppliers.

CHAPTER 6
PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Deposition is the geological process in which sediments, soil and rocks are added to a landform or land mass. Wind, ice, and water, as well as sediment flowing via gravity, transport previously eroded sediment, which, at the loss of enough kinetic energy in the fluid, is deposited, building up layers of sediment.

Deposition occurs when the forces responsible for sediment transportation are no longer sufficient to overcome the forces of gravity and friction, creating a resistance to motion, this is known as the null-point hypothesis. Deposition can also refer to the buildup of sediment from organically derived matter or chemical processes. For example, chalk is made up partly of the microscopic calcium carbonate skeletons of marine plankton, the deposition of which has induced chemical processes (diagenesis) to deposit further calcium carbonate. Similarly, the formation of coal begins with deposition of organic material, mainly from plants, in anaerobic conditions.

Sediment in rivers gets deposited as the river slows down. Larger, heavier particles like pebbles and sand are deposited first, whilst the lighter silt and clay only settle if the water is almost still. The flow of water is strongest on the outside of river bends, eroding the bank, but is slowest on the inside of the bends, allowing deposition of sand and gravel. When a river "bursts its banks" after heavy rain, flood water spreads out across the floodplain and, because this water hardly moves, finer silt and clay are deposited – often making good farmland.

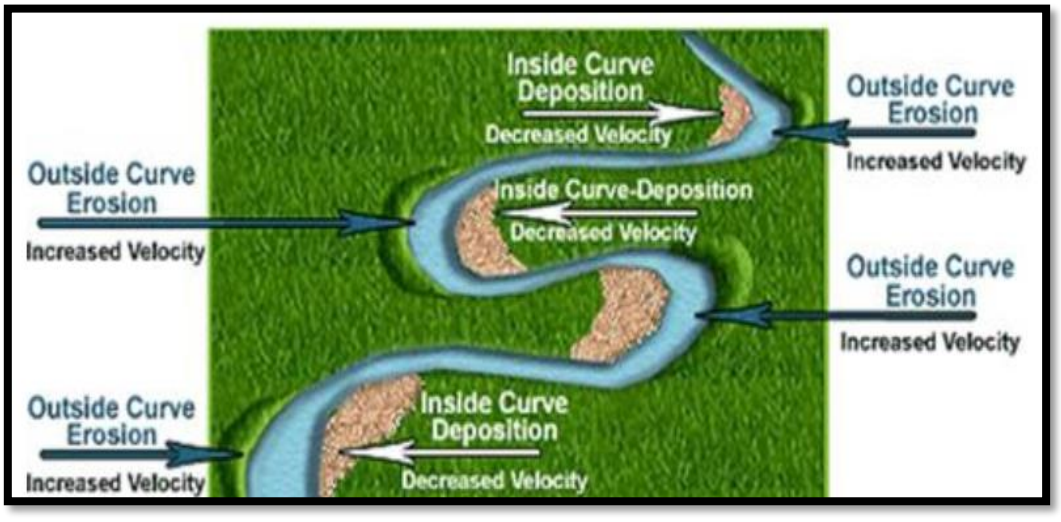


Fig 1: Erosional and Depositional Sites in River (Mendering)

The term load is technically defined as the total weight of solid detritus transported in unit time. The transporting capacity of a stream rises very rapidly as the discharge and the velocity increases. Experiments show that with debris of mixed shapes and sizes, the maximum load that can be carried is proportional to something between the third and fourth power of the velocity. But the fragments of a given shape, the largest size that can be moved (not the actual mass of mixed debris) is proportional to the sixth power of the velocity, provided of course that the depth of water is also adequate for the purpose. As the velocity of a river is checked, the bed load s first to come to rest with continued slackening of the flow, the larger ingredients of the suspended load are dropped, followed succevily by finer and finer particles. When the stream begins to flow more vigoursly, the finer materials are the first to move again. A river begins to sort out its load or burden as soon as it receives it. The proportion of fine to coarse amongst the deposited materials tend on average to increase downstream, but there may be interruptions of this tendency because of addition of coarse debris from tributataries or from landslides and steepening of thebanks.

Sediment Transportation

Sediment transport is the movement of organic and inorganic particles by water. In general, greater the flow more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material. Another name for sediment transport is sediment load. The total load includes all particles moving as bed load, suspended load, and wash load.

Bed load

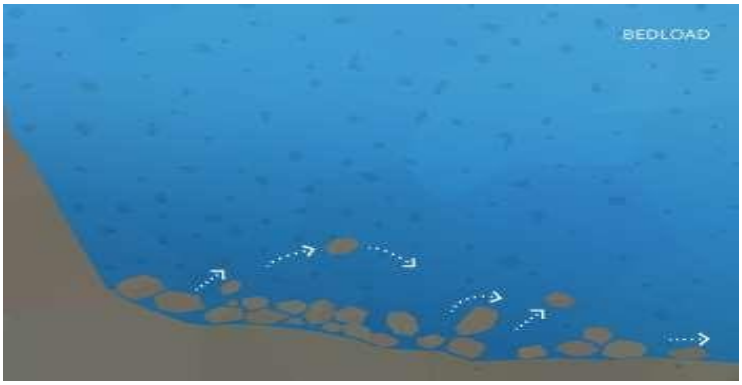


Fig 2: Bed load particles travel with water flow by sliding or bouncing along the bottom.

Bed load is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterways. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bed load occurs

when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bed load transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bed load. In situations where the flow rate is strong enough, some of the smaller bed load particles can be pushed up into the water column and becomesuspended.

Suspended Load

While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows.

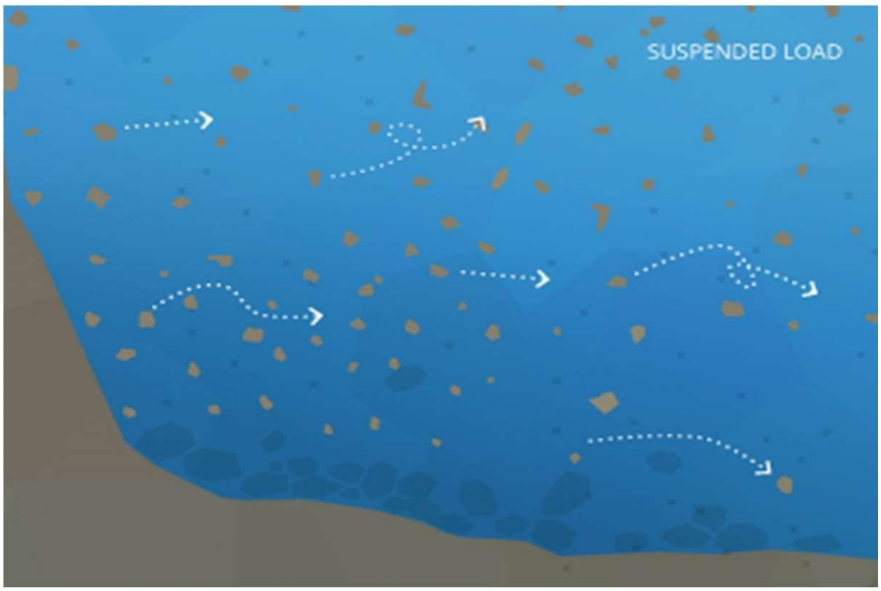


Fig 3: If the water flow is strong enough to pick up sediment particles, they will become part of the suspended load.

Wash Load

Fig 4: The wash load is the portion of sediment that will remain suspended even when there is no water flow.

The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow-moving rivers is typically due the wash load. When the flow rate increases (increasing the suspended load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location.

What is Sediment Deposition?

Sediment is necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low.

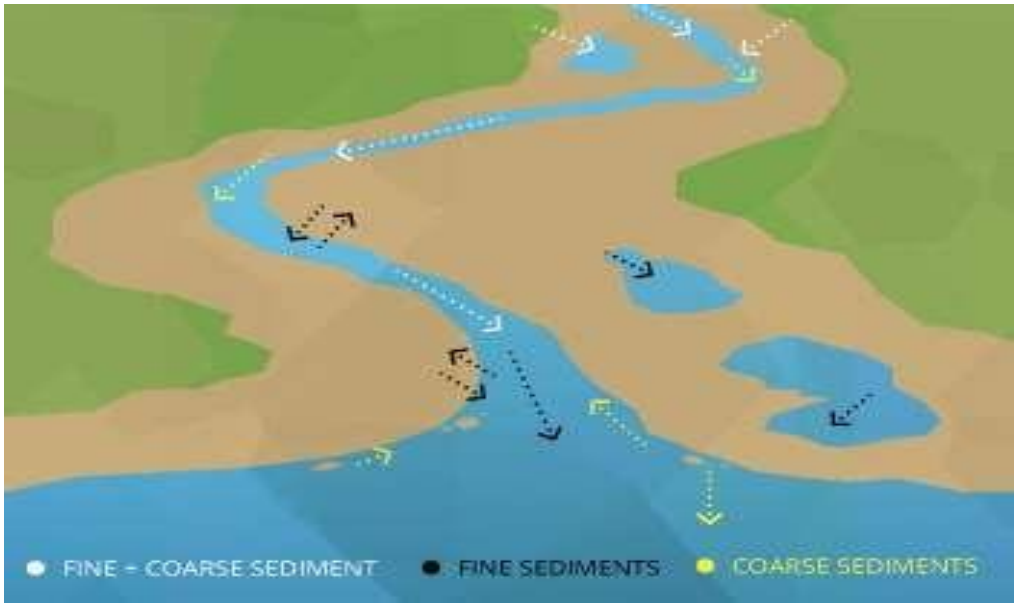


Fig 4: When the flow rate changes, some sediment can settle out of the water, adding to point bars, channel bars and beaches

Sediment transportation and Deposition is depending upon various factors like Slope of the Area, Annual Rainfall, Lithology, and flow intensity of River, Geomorphology, Soil, Geology and Land use.

CHAPTER- 7
GENERAL PROFILE OF THE DISTRICT

7.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India

Table 7.1: Brief Description of Nagpur District

Sr. No.	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

7.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

7.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: https://mahaforest.gov.in

7.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23.911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932 Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07% 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68,30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: https://nagpur.gov.in/demography)

7.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city. An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneshwar, Thiruvananthapuram, Cochin, Gorakhpur. Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region.
(Source: https:/www.nmcnagpur gov.in/location-and-connectivity)

CHAPTER 8
REPLENISHMENT STUDY OF SAND GHAT

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course where annual deposition is one meters, but it is noticed that during flood season whole of the pit so excavated is completely filled up and as such the excavated area is replenished with new harvest of minerals.

The data below represents thickness of sand in respective Sand Ghats which is allowed to be excavated after the Survey carried out by taluka level technical committee who estimated the depth and area of each Sand Ghat as per Sand Mining Policy existing during the surveys. This data shows the trend of replenishing sand each year in the respective Sand Ghatas well as of the River in Nagpur district.

Methodology adopted for the sand replenishment study

1. **Field data collection** followed by cross section survey over the sections of fixed intervals. Along the river showing river bed material (RBM) with present elevations.
2. **Remote sensing**- used for identification of watershed area relevant to the mine lease. The data used from the latest satellite imagery.
3. **Estimation of catchment yield and bed load transport**. The catchment yield has been computed using the Strange"s runoff method (Strange"s Monsoon runoff curves) for the runoff coefficient. The iso-pluvial maps of IMD have been used for estimation of catchment yield and peak flood discharge for the study area by various methods like Dickens, Jarvis, and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport comprises of use of analytical models namely the Einstein, Meyer Peter and Ackers & White's equation for calculation of bed load transport.

Study area:

Proposed leases are located all over the entire district. There are two major Rivers in the District namely Kanhan and Pench.

Kanhan River: Kanhan River: The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh.

Pench River: The Pench River is a left bank tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and Nagpur district of Maharashtra.

Rainfall Data for the study area:

The district falls in assured rainfall zone and receives 80% of the total rainfall during June to October. The average rainfall of the district is 1086.26 mm over rainy days.

Year	Rainfall	Year	Rainfall
1998	1154.3	2011	943.5
1999	1385	2012	1030.5
2000	1384.5	2013	1433.4
2001	1455.8	2014	797.3
2002	870.1	2015	1100.9
2003	1075.8	2016	823.6
2004	699.2	2017	821.5
2005	1333.5	2018	902.6
2006	1002	2019	1129.1
2007	1150.2	2020	1106.9
2008	849.6	2021	1410.2
2009	947.8		
2010	1263		
Avarage Rainfall in mm			**1086.26**

Table: Rainfall of the District (Source: maharani.maharashtra.gov.in)

Strange's monsoon rainfall-runoff curves:

The dependability has been calculated on the basis of last 22 years rainfall, as indicated in Table-2 where water availability has been considered for arriving at 50% dependability (Table-3 and 4) respectively.

S. N.	Rainfall (Mm)	S. N.	Rainfall (Mm)
1	1455.8	12	1030.5
2	1433.4	13	1002.3
3	1385.	14	947.8
4	1384.5	15	943.5
5	1333.5	16	902.6
6	1263	17	870.1

7	1154.3	18	849.6
8	1150.2	19	823.6
9	1129.1	20	821.5
10	1100.9	21	797.3
11	1075.8	22	699.2

Table: Rainfall data (arranged in descending order) of each year's rainfall as mentioned.

	Rainfall dependability percentage
	p= 50%
m=	N * P/100
	N=22, p=50
m=	11

Table: Calculation of order number (m)

Where, m-Order number

N- The available rainfall data of the past N years is first of all arranged in the descending order of magnitude

p=Dependability percentage

The rainfall value tabulated above in Table, the Order No. 11 has the values of 1075.8 mm

So, $P_{50\%}$= 107.58 cm

Average value of Strange's Run off percentage is calculated from Strange's monsoon rainfall runoff curves (Figure-7.1) considering the catchment area as good and the Runoff % for the area is

Runoff % at 50% dependability of rainfall = 40%

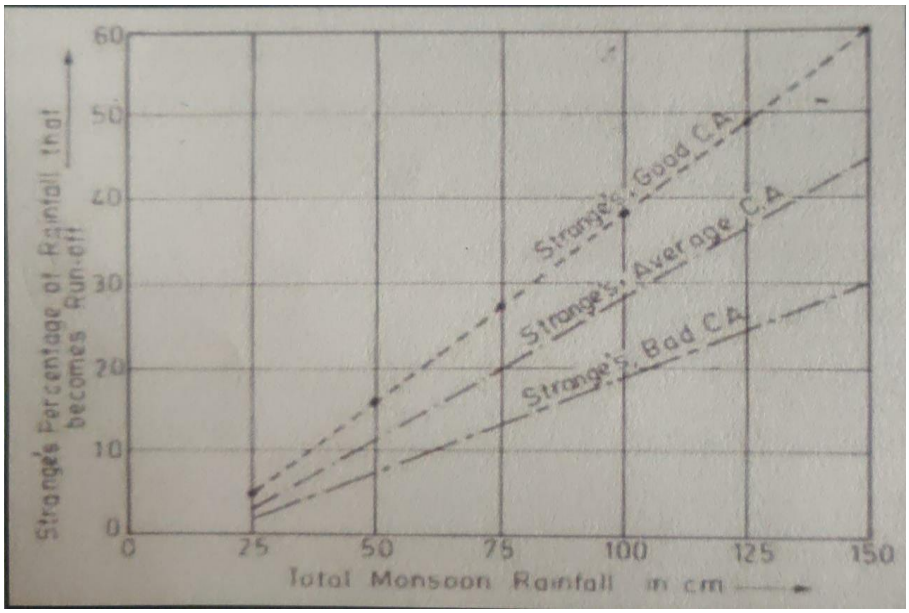


Figure- Strange's monsoon rainfall- runoff curves

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

There are nearly 28 locations of Proposed sand sand ghats over Kanhan and Pench river where sand deposition are allowed from replenishment and other safety point of view in the district.

The factor which affects the "Computation of Sediment" is:

a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :

- Structural Plain
- Structural Hill
- Structural Ridge
- Denudation Ridge & Valley
- Plain & Plateau of Gangetic plain
- Highly Dissected pediment
- Un dissected pediment

b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)

c) Drainage System/Pattern of the area (Drainage Density = …….Km/Sq. Km of River

d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Basin/River

There are many sediment transport equations which are suitable for use in the prediction of the replenishment rate of rivers/ watershed. Some of the famous sediment transport equations are:-

1. Dendy – Bolton Equation

2. Yang Equations

3. Engelund-Hansen Equation

4. Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977) – it includes only one type of sediment yield (sheet and rill Erosion). Dendy - Bolton formula is often used to calculate the sedimentation yield. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. Dendy and Bolton equation calculates all types of sediment yield i.e. sheet and rill Erosion, gully Erosion, channel Bed and bank erosion and mass movement etc.

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral (sand) naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance.

Rivers under Study

Kanhan River:-

The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur.

Kanhan was surprisingly not mentioned in the 2001 list of notified rivers in Maharashtra which has led to unrestricted exploitation in the form of sand mining along the river bed.[1] This failure to recognise its presence has been viewed as a deliberate attempt at unregulated economic gains. The catchment area has also seen large scale coal mining in recent years. Efforts are currently underway to notify the river to prevent further environmental damage. This has been undermined by plans[2] for construction of a barrage. The river was perennial until a few decades ago, but now goes dry by February every year.[3]

he Kanhan rises on the slopes of the hills at the southern edge of the Satpura range to the north of Damua and west of Junnardeo, a town in Madhya Pradesh, India. The source lacks clear documentation and is not celebrated or considered holy, unlike most other rivers of a similar size.

The Kanhan is Wainganga's longest tributary, at 275 km. It rises in the southern spurs of the Satpura Range in the north-western region of Chhindwara District. Flowing south from its origin, Damua is the first town it encounters. Here it intersects the town and allows for its flow to be controlled by means of a dam. It then runs along a south & southeastern direction, meandering through the countryside of Chhindwara District where it has been productively harnessed for growing Tur dal and cotton. The river comes to lie about 5 km to the south of Deogarh fort where it humbly receives an insignificant tributary. Upon reaching the town of Ramakona it is crossed by a rail bridge as well as another road bridge which supports NH-26 B. Nearly at the end of its course in Madhya Pradesh at Razadi Borgaon, it is joined by Jam River, and for a short distance provides a natural boundary with adjoining state Maharashtra.

Within Maharashtra the river is at its widest at Kamptee where it receives the Pench River- a left bank tributary and its largest one. Another tributary connecting it at its right bank is Kolar River - the spill off from Kolar Dam. The river now comes to be at the northeast of Nagpur from which it receives the metropolitan city's effluent waste by way of the Nag River. A little further from Kamptee, it flows along the town Kanhan - its etymology derived from the river. Situated alongside the town is a large coal mine, one of the many coal mines situated along its river basin. From here the river flows south-east and ends its course by joining the Wainganga at the village of Ambora in Nagpur District.

Along its 275 km run through the Indian States of Madhya Pradesh & Maharashtra, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur. The catchment area of the sub-catchment is about 7968 km2.

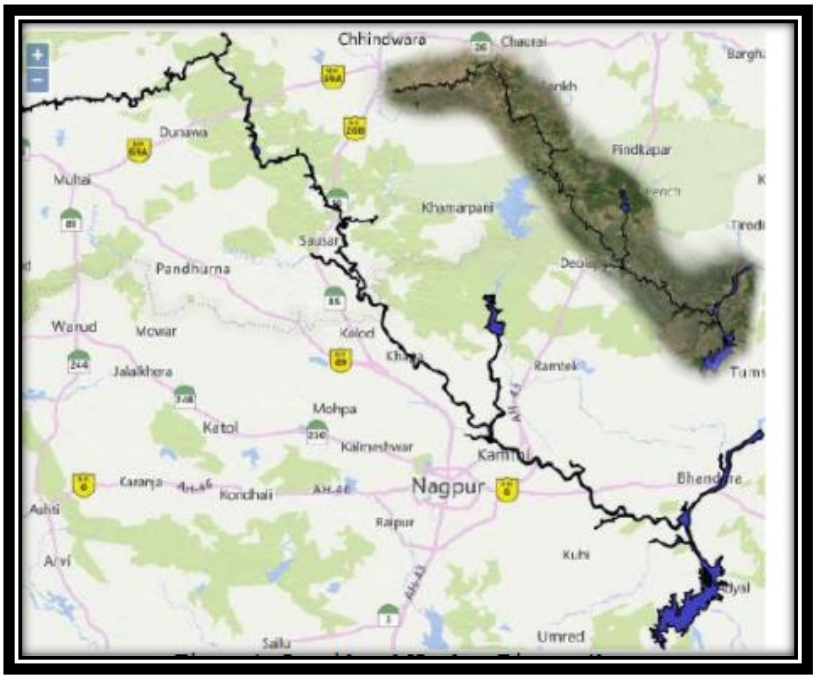


Fig: Kanhan River Path

Pench River:

The **Pench River** is an Indian tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and flows across Pench National Park, which is a reserve for the Tiger Project of India.

The two big dams of the Pench River supply water to the city of Nagpur and to the big thermal power plant located there.

The catchment area of the sub-catchment is about 4847 km2. The climate of the sub-catchment area is usually pleasant most of the year, except in summer. The sub-catchment lies in the medium rainfall zone. Most of the rainfall is received during the South-West monsoon from June to October.

Fig: Pench River Stream order

Dendy Bolton Equation for Estimation of Sediment Yield

Dendy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation's development. However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values.

The equations express the general relationships between sediment yield, runoff, and drainage area. Many variables influence sediment yield from a drainage basin. They include climate, drainage area, soils, geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the

relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decreases as drainage area increases.

As drainage area increases, average land slopes usually decrease; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tend to decrease sediment yield per unit area. In arid regions, sparse precipitation and low run-off are the limiting factors. As precipitation increases, density of vegetation also increases, resulting in less erosion. In areas with adequate and evenly distributed precipitation, vegetation thus becomes the limiting factor.

The accuracy of the sedimentation surveys varied, ranging from reconnaissance type measurements of sediment deposits to detailed surveys consisting of closely spaced cross-sections or contours. Runoff data are translated to inches per year per unit area and sediment deposition data to tons per year per square mile of net drainage area. Net drainage area is defined as the sediment-contributing area and normally excluded areas above upstream reservoirs or other structures that were effective sediment traps. Actual sediment yields undoubtedly were slightly higher because most reservoirs do not trap inflowing sediment.

As per **Dendy & Bolton study,** "Sediment Yield" can be related to

i. Catchment Area and
ii. Mean Annual Run-off

Sediment Yield versus Drainage Area:

Dendy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi^2. The smaller watersheds-those of drainage area less than 1 mi^2,were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi^2, Dendy and Bolton found that the annual sediment Yield per unit area was inversely related to the 0.16 power of the drainage area:

In which S= sediment yield in tons per square mile per year;

SR = Reference sediment yield

Corresponding to a $1mi^2$ drainage area, equal to 1645 tons per year;

A = drainage area in square miles; and

AR = reference drainage area (1 mi^2)

Sediments Yield versus Mean Annual Runoff

Dendy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Sediment yield increased sharply to about 1,860 tons per square mile per year as run-off increased from 0 to about 2 inches. As runoff increased from 2 to about 50 inches, sediment yield decreased exponentially. Because sediment yield must approach zero as runoff approaches zero, a curve through the plotted points must begin at the origin. The abrupt change in slope of a curve through the data points at Q equals 2 inches precluded the development of a continuous function that would adequately define this relationship. Thus, there are two equations derived for when Q was less than 2 inches and when Q was greater than 2 inches.

This led to the following equations.

For Q <2in.:

For Q >2in.:

In which QR = reference mean annual runoff QR = 2 in.

Combined Effect of Drainage area and Run off on Sediment Yield

Dendy- Bolton determined the combined influence of runoff and drainage area on sediment yield to compute the sediment yield. They developed two equations i.e. for run off less than 2 inch and for run off more than 2 inch, which are given below:-

For run off less than 2 inches:

(Q < 2 in) $S=1280*(Q)^{0.46}*[1.43-0.26\ Log(A)]$

For run off more than 2 inches:

(Q > 2 in): $S= 1965*(e^{-0.055Q})*[1.43-0.26\ Log\ (A)]$

Where: S = Sediment yield (tons/sq miles/yr)

Q = Mean Annual runoff (inches)

A = Net drainage area in sq mile

Calculation of Sediment Yield

- Average Annual Rainfall of Nagpur district (1998 to 2021) :

  1086.26 mm (42.76 inch)

- Catchment area of Kanhan River:

  7968 km^2 (i.e. 3076.44 mi^2)

- Catchment area of Pench river :

  4847 km^2. (i.e. 1871.42 mi^2).

With above inputs, the calculation of the sediment yield by the Dendy -Bolton formula is illustrated below:

Sr. No.		
1	Sediments Yield Here: Q (In) = Mean Annual run off = 1086.26 mm (42.76 in) (= Run-off Coefficient * Average Annual Rainfall) = 0.27*42.76 = 11.54 inches A (mi^2) = Catchment area Kanhan River = 7968 km^2 (i.e., 3076.44 mi^2) Pench River = 4847 km^2. (i.e., 1871.42 mi^2).	For Q<2 S = 1280 Q0.46[1.43 - 0.26 log(A)] For Q>2 S = 1965 e-0.055Q [1.43 - 0.26 log(A)]
2	Sediment Yield for Kanhan River = Sediments Yield S = Layer/Year For Q>2 S = 1965 e-0.055Q [1.43 - 0.26 log (7968] **S=** 273106.78 M. tons/yr or 34.28 M. tons/km^2/yr	**273106.78 M. tons/yr** Sediments will be regenerated every year increasing the mineable reserves
3	Sediment Yield for Pench River = Sediments Yield S = Layer/Year For Q>2 S = 1965 e-0.055Q [1.43 - 0.26 log (4847)] **S=** 183960.35 M. tons/yr or 39.95 M. tons/km^2/yr	**183960.35 M. tons/yr** Sediments will be regenerated every year increasing the mineable reserves

(Source: sediment yield by the Dendy-Bolton formula)

Conclusion:

From the above calculations, annual replenishment rate for Kanhan river is estimated at **273106.78 M. tons/yr** and that for Pench River is estimated at **183960.35 M. tons/yr** for the year **2021**. And annual replenishment rate for Kanhan river is estimated at **281567.64 M. tons/yr** and that for Pench River is estimated at **189659.45 M. tons/yr** for the year **2020. Total Replenishment of sand in Kanhan River is 96.99 % and Total Replenishment of sand in Pench River is 96.99%.**

Dendy – Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100-fold from computed yields. The equations express the general relationships between sediment yield runoff and drainage area. They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dendy & Bolton have derived the equation from average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density.

Factors which have direct bearing on sediments yield & limitations of Dendy -Bolton equation: Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dendy - Bolton has categorically stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. **Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.**

References:

1. Ponce, V. M., 1989. Engineering Hydrology, Principles and Practices, Prentice Hall, pages 547-548.
2. Online sediment yield by the Dendy-Bolton formula

CHAPTER 9
LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING

Forest:

During the year 2011-2012 an estimated 2523 Sq. KMs. of area was under forest which is 25.51% of the total area. Most of the land under forest can be found on the banks of Pench River, at the foot hills of Satpuda in Ramtek tahsil forest has been divided in 3 categories namely reserved, protected and unclassified. Area under these categories is given below.

Sr.No	Category	Area in Sq.Kms.
1	Reserved Forest	1387
2	Protected Forest	832
3	Unclassified Forest	304
	Total	**2523**

Table –A: Forest Categary in the District

Sr.No	Forest Produce	Production	Value for Sale in '000'
A) Major forest products:			
1	Timber wood (m3)	1.613	17820
2	Fuel wood (m3)	6.969	6774
B) Minor forest products:			
3	Bamboo (Nos.)	13702	127.85
4	Tendu Leave (S.B.)	38408	31405.74
5	Gum (Quintal)	12	65.70
6	Others	10	14.40

Table B: The Major and Minor forest products of the district

Agriculture:

Nagpur district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The district has total geographical area of 9892 Sq.Km. Out of these 644 th.hq. is cultivable area. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. The area and production of principal crops are given in Table –C

Sr. No.	Crop	Area in'00' ha.	Production in '00'tonnes	Productivity in kg/ha.
		2009-2010	2011-2012	2008-2009
1	Paddy	646	1466	1419
2	Soyabean	2779	1411	823
3	Wheat	636	1073	1191
4	Ground Nut	43	23	670
5	Jowar	259	60	305
6	Cotton	7454	213	250
7	Tur	294	466	532
8	Gram	394	611	734

Horiculture:

As a cash crop, concept of growing different variety flowers in the district is on constant increase. Indication of society towards flower decoration on different occasion has enhanced. Total area under floriculture was 22742 hectares and the total production of Rose, Shewanti, Zendu, Nishigandha, Gladioli, Gaillardia, White Lilly, Goldenrod, Dezi, Mogra and Ostre are 1365.53 M.T. Camomile, Rose, Mogra, Lilly and Marigold can be developed in Nagpur dist. for the industrial use. It may used to manufacture perfumes, Rose water and Gulkand. The important cut flowers like Rose, Lilly, Chrysanthemum, Gladidus, Carnation, Tuberose and Orchids can be developed in Nagpur for Exports.

Land Use pattern:

The total area of the district is 986 thousand hectares of which forest cover 159 thousand hectares, 121 thousands hectares are not used for the Agriculture and area under cultivation is 644 thousands Hectares. The land utilization pattern of the district is given in Table -D

Sr.No	Classification	Area in '000' hectare
1	Total geographical area	986
2	Forest land	159
3	Barren land	128
4	Land to non-agriculture use	121
5	Cultivable area	644

Table D: Land Utilisation

Mineral Resources:

Nagpur district is moderately rich in minerals. Deposits of coal, manganese Ore, Dolomite, Limestone, Iron Ore, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan (Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	Production (MT)	Value (Rs. Lakh)	No of Mines
1	Manganese Ore	644590	28169.7616	37
2	Coal	16638820	17010814.54	15
3	Dolomite	43207	60.66	7
4	White Clay	200	0.12	02
5	Quartz	80	0.05	02
6	Sand (Stowing)	34562.814	518.422	04

Table –E: Mineral production in Nagpur district 2006-2007

Sr.No	Mineral	Deposits in Million Tonnes
1	Coal	1183.395
2	Lime stones	31.000
3	Manganese ore	9.389
4	Dolomite	28.740
5	Clay	3.555
6	Copper ore	1.300
7	Tungsten ore	19.980
8	Zinc ore	8.270
9	Chromites	0.056
10	Granite (Million Cubic mt.)	4.880

Table E: Mineral deposits in Nagpur

Fisheries:

Out of the total geographical area of the district an area of 15037 hectares can be used for fish farming apart from the 650 Kms long area under river water. During the 2010-2011 the fish production in the district was around 11200M.T. valued at approximately over Rs. 5600 lacs. Maharashtra Govt. has undertaken various developmental schemes/project for fish farming.

Sericulture:

Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world.India has also the distribution of producing all the three commercially known varieties of silk viz.Mulbery, Tassar, Iri and Murga. Maharashtra state stands third in the country in Mulbery and Tassar cultivation according to latest estimates. The present area under Sericulture in Nagpur district is about 141.00 acres which is mostly concentrated in Nagpur, Kalmeshwar, Katol, Narkhed and Ramtek of Nagpur district.

CHAPTER 10

PHYSIOGRAPHY OF THE DISTRICT

Nagpur district is situated in the eastern part of Maharashtra and renowned for its citrus orchards and manganese deposited and manganese deposits. Nagpur District lies in the southern fringes of Satpura range. It is hilly in the northeast and west where the elevation varies from 350m to 583m msl. The Southern and eastern parts have vast pediplain with gentle slopes towards east. The average elevation of the pediplain surface is about 300m msl. Pench and Kanhan are the main tributeries of Wainganga River flowing from northwest to southeast in the northernpart.

The westem and south western parts of the district are drained by Wardha and its tributaries like Bor, Wenna Jam and Kar rivers. The Wainganga and its tributaries viz Kanhan, Kolar, Pench, Sur and Nag drain the eastern and east central parts of the district. The area contained within the district is underlain by the Archaean rocks to the north and east and younger sedimentaries like Lametas and Gondwanas, being embedded by flows (Deccan basalt) to the west and south. The district is well known for the minerals of economic importance like coal, manganese ore, dolomites, white clay, copper, tungsten ore etc.The principal soil of the district is known as morand' (light deep, black and grey in colour) covers about two-third of the cultivated area. Kali (medium- deep, black) is found in small pockets of Wardha and othér river valleys. Khardi (shallow, grayish) is sandy soil. found in the eastern part and bardi (red gravelly, with boulders) is found in the trap hill region of the westem part of the district.

Fig: Image Showing Physiography of the district

CHAPTER 11
RAINFALL OF THE DISTRICT & CLIMATIC CONDITION

Climate and Rainfal: The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, Le. June to September The mean minimum temperature is 12°C and mean maximum temperature is more than 45°C The normal annual rainfall (1901-1992) over the district ranges from about 1000 mm to 1200 mm. It is the minimum in the Narkhed (869.9mm) and increases in the eastern direction and reaches a maximum around Umred (1164.9 mm) Rainfall data from 14 rain gauge stations for the periods 2010-2021 are given in Chapter 8. The average annual rainfall for the last 10 years ranges from 479.2 in Hingni to 1856.3 in Umrer. It is also observed that all stations hang recoded average annual rainfall within the range of district normal annual rainfall except at Hingni, Katol, Narkhed and Kamleshwar where it is less than normal.(Source: www.agri.mah.nic.in)

CHAPTER 12
GEOLOGY AND MINERAL WEALTH

Regional Geologyof the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocean in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocean period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystallineseries.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern ‘Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern' Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calcyphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganiferous rocks known as Gondite. Gondite (named after the aboriginal tribe ‘Gonds’ found in these areas) is a rock composed of quartz and manganese Garnet ‘spessar-tite’. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (fromJunawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite Chiklite, Winchite*, *Juddite, Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiegneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of theSausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausarseries.

Structure of Archaean Rocks:

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be al zone of faulting or overthrust. In theSausar series the southern part is composed of isoclinal folds with steep (50º-80º) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three ‘Nappe’ units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southernly dip. ‘Nappe’ is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting ‘cross-fold’ structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20°to30° towards East.

Gondwana Supergroup:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults,

which in many cases form he boundary of Gondwanas with older rocks and therefore known as ‘Boundary fault’. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) byKamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaeanrocks.

Barakars:

Coal-hearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakaroutcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch uptoBhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4wide).Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south- south-west and their estimated thickness is about 1,500 km.

Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllotheca, Vertebraria, Pecopteris, Gangamopteris, Angiopteridium, Macrotaeniopteris, Noeggera- thiopsis and Glossopteris.* The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania, Paludina and Corbicula andPhysa.*

Deccan Basalt (Traps) and Intertrappeans:

The western part of the district is covered by layers or doleritic and basaltic lavas, commonly known as ‘traps’ because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border intoNagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to ‘Plateau basalt’ type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are generally dark grey in colour having a specific gravity of 2.9.

Geological succession of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows (Traps)with Associated Intertrappean sediments	Lower Eocene to pper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthi stage Barakar stage Talchir stage	Permian Corboniferous
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

1) Disrtict wise details of rivers and others Stream:

Sr. No.	Name of river	Area drained in sq. km	% area drained in district
1	Kanhan	1488	46 %
2	Pench	557	17 %
3	Wardha	223	07 %
4	Kolar	996	30 %

2) Sailent features of important rivers and streams

Sr. No	Name of the river or stream	Total length in the district in km	Place of origin	Altitude at origin
1	Kanhan	113	Damua, Satpura range, MP	-
2	Pench	56	Junnarde, Chindawara District, MP	1048m
3	Wardha	60	Khairwani near Multai, Betul. District, MP	785m
4	Kolar	54	N-E corner of Katol Taluka, MH	600m

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Kanhan River (22)	10.17	80 (Total width-1760m)	777500.00	177846
Pench River (6)	1.90	84.1 (Total width-505)	157000.00	35469

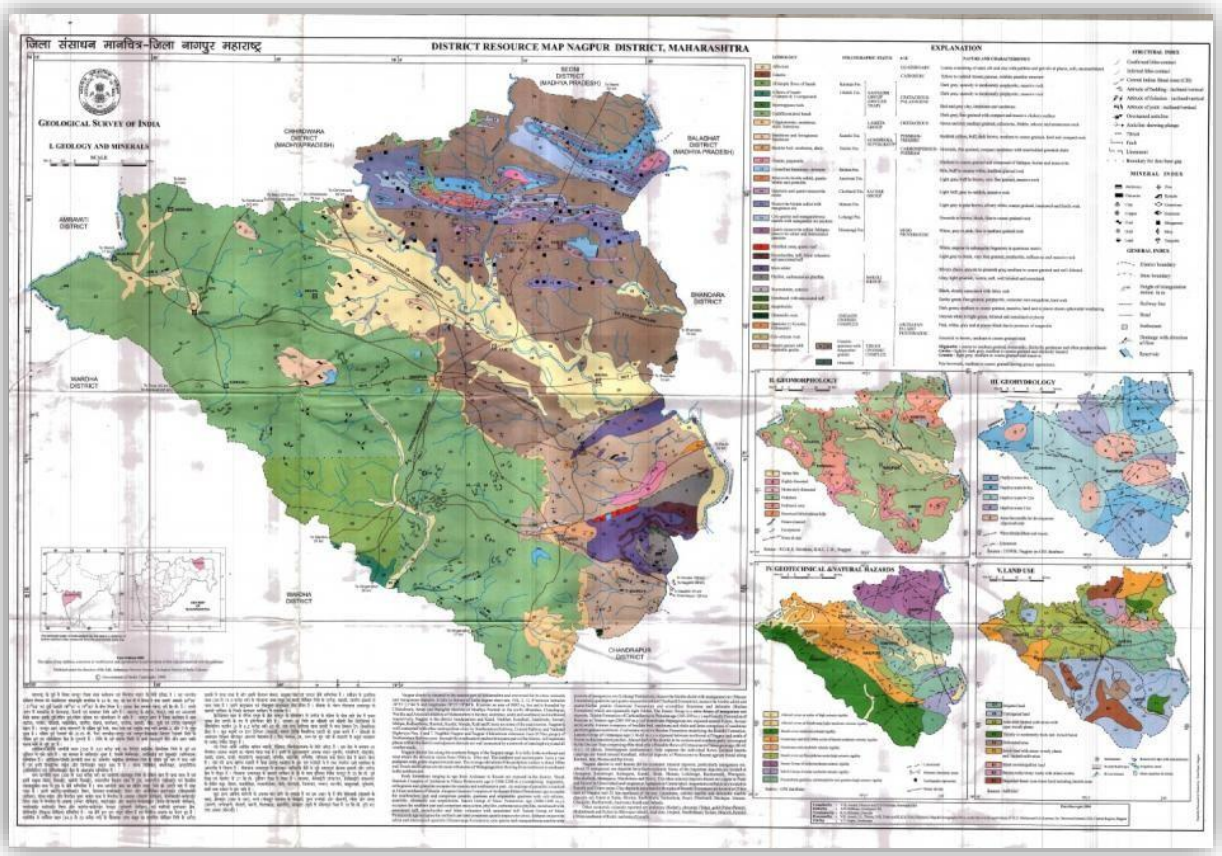
Mineral potential

Sr. No.	Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
2018	7063875	3803625	205992	**11073492**

Methodology adopted for calculation of mineral potential

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or streamAs per the site conditions and location, depth of minable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50% to 60% of the area of a particular river or stream. For Example, in some hill States mineral constituents like 47 boulders, river bor Bajri, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particularriver or stream.

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.



.Fig: Geological map of Nagpur District

RECOMMENDATION OF ENFORCEMENT & MONITORING GUIDELINES FOR SAND MINING BY MOEF&CC-2020

Introduction:

The Ministry of Environment Forest & Climate Change formulated the Sustainable Sand Management Guidelines 2016 which focuses on the Management of Sand Mining in the Country. But in the recent past, it has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring. Section 23 C of MMDR. Act 1957 empowered the State Government to make rules for preventing illegal mining, transportation and storage of minerals. But in the recent past, it has been observed that there was large number of illegal mining cases in the Country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment. India is developing at a faster pace and much technological advancement has already been taken place in the surveillance and remote monitoring in the field of mining. Thus, it is prudent to utilize the technological advancement for the effective monitoring of the mining activities particularly sand mining in the country.

Use of latest remote surveillance and IT services helps in effective monitoring of the sand mining activity in-country and also assist the government in controlling the illegal mining activity in the country. Thus, there is a need for an effective policy for monitoring of sand mining in the Country which can be enforced on the ground. These guidelines focus on the effective monitoring of the sand mining since from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public. Further, the effective monitoring and enforcement require efforts from not only Government agencies but also by consumers and the general public. (Source: EM guidelines, MoEF&CC, New Delhi 2020).

The need for replenishment study for river bed sand is also required in order to "nullify the adverse impacts arising due to excessive sand extraction". No riverbed mining will be allowed during the monsoon. In cases where rivers become district boundaries or state boundaries, the districts or states sharing the boundary shall constitute the combined task force for monitoring of mined materials. Mining activity and participate in the preparation of District Survey Reports (DSR) by providing appropriate inputs. The guidelines say the detailed survey

needs to be carried out for quantification of minerals and the demand and supply of the riverbed material through market survey, including the future demand for the next five years.

OBJECTIVE OF GUIDELINES

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand & Gravel Mining in the Country since its identification to its final end-use by the consumers and the general public.
3. Use of IT-enabled services & latest technologies for surveillance
4. Reduction in demand & supply gaps.
5. Setting up the procedure for replenishment study of Sand
6. Post Environmental Clearance Monitoring.
7. Procedure for Environmental Audit
8. To control the instance of illegal mining.

Salient Features of the Guidelines

District Survey Report:

The guidelines provide the procedure to be followed for identifying areas where mining can be allowed or prohibited. It provides guidelines for preparing a district survey report, which includes: Preparing a report before granting a mining lease, and Defining mining and no mining zones based on certain environmental and social factors.

Preventing Illegal Mining:

The guidelines suggest that sites can be monitored remotely. Dronescan also be used for quantity estimation and land use monitoring. Further, the guidelines proposenight surveillance of mining activity through night-vision drones. The environmental damagesincurred due to illegal mining will be assessed by a committee constituted by the District Administration;

Environmental Clearance:

Environmental Clearance for mining is given by regulatory after considering the potential environmental impact. However, it has been observed that often the Letter of Intent (Lol) is granted for a location which is not feasible for environment-friendly mining. The guidelines provide that Lots should be granted for those locations which have the least possibility of an impact on the environment nearby habitation.

The guidelines also encourage for online sale and purchase of sand and other riverbed materialsto make the process transparent.

Preparation of District Survey Report:

"Sustainable Sand Mining Guidelines, 2016" issued by MoEF&CC requires preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease Lol. The guidelines emphasize detailed procedure to be followed for the purpose of identification of areas of aggradation deposition where mining can be allowed and identification of areas of erosion andproximity to infrastructural structures and installation where mining should be prohibited. Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining: identifying measures for protection of environment and ecology and determining measures for protection of bank erosion, benchmark (BM) with respect to mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed.

Considering the importance of district survey report, the Ministry of Environment Forest and climate change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand mining.

a) District Survey Report for sand mining shall be prepared before the auction/c-auction/grant of the mining lease/Letter of Intent (Lol) by Mining department or department dealing the mining activity in respective states.

b) The first step is to develop t entory of the River Bed Material and Other sand sources in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand (M-Sand). The source will include rivers, de-siltation of reservoir/dams. Patta lands/Khatedari Land, M-sand etc.

c) District Survey Report is to be prepared in such a way that it not only identifies the mineral bearing area but also define the mining and no mining zones considering various environmental and social factors.

d) Identification of the source of Sand & M-Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/Khtedari lands. The details in case of Rivers such as [name, length of river, type (Perennial or Non-Perennial), Villages, Tehsil, District], in case of Lakes, Ponds, Dams, De-silting locations [Name, owned/maintained by (State

Govt/PSU), area, Villages, Tehsil, District] in case of Patta land/Khtedari lands [Owner Name, Sy No. Area, Agricultural/Non-Agricultural, Villages, Tehsil, District], in case of M-Sand Plant (Owner Name, Sy No, Area, Quantity/Annum, Villages, Tehsil, District], needs to be recorded as per format.

e) Defining the sources of Sand/M-Sand in the district is the next step for identification of the potential area of deposition/aggradation wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and original ground level (OGL)to be recorded and area of aggradation/deposition needs to be ascertained by comparing the level difference between the outside riverbed OGL and water level Once the area of aggradation deposition are identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central th part of the river, width needs to be identified on a map. Out of the Nath part area, where there is a deposition aggradation of the material needs to be identified. The remaining ah area needs to be kept as no mining zone for the protection of banks. The specific gravity of the material also needs to be ascertained by analyzing the sample from a NABI. Accredited lab Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters

g) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc, and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area

h) Demand and supply of the Riverbed Material through market survey needs to be carried out. Inaddition to this future demand for the next 5 years also needs to be considered.

i) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.

j) The final area selected for the mining should be then divided into mining lease as per therequirement of State Government. It is suggested the mining lease area should be so selected asto cover the entire deposition area. Dividing a large area of deposition/aggradation into smallermining leases should be avoided as it leads to loss of mineral and indirectly promote illegalmining.

k) Cluster situation shall be examined. A cluster formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha.

1) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed whenone cluster is at a distance of 2.5 Km from the other cluster.

m) The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibilityof replenishment of material In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.

n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.

o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as Annexure-II. The Sub Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for

selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in Annexure-III The details of the transportation need to be provided as in Annexure IV.

p) Public consultation-The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public The comments so received shall be placed before the sub-divisional committee for active - consideration. The final list of sand mining areas [leases to be granted on riverbed &Patta land/Khatedari land, de-siltation location (ponds/lakes/dams). M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per Annexure-V.

ANNEXURES

ANNEXURE NO- 1

Compliance of Enforcement and Monitoring Guidelines for Sand Mining-2021

Details of Sand/M-Sand Sources

a) Rivers

River Name/M- Sand	Total Stretch of River(in Km)	Type of River (Perennial or Non- Perennial)
Kanhan River	10.545	Non- Perennial
Pench River	1.909	Non- Perennial

b) De-silitation (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Cpntrolled By State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil						

c) Patta Lands/Khatedari Land

Owner	Sy. No.	Area (ha)	District	Tehsil	Village	Agriculture Land (Yes/No)
Nil						

d) M sand

Plant Name	Owner	District	Tehsil	Village	Geo-Lacation	Quantity Tonnes/Annum
Nil						

ANNEXURE NO- II

List of Potential Mining Leases (Proposed Sand Ghat) 2021-2022

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest(In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri/ RBM etc.)	Existing/Proposed)
Saoner									
1	Kanhan	Wakodi	3.50	- -	More than 500 m	No	4946	Sand	Proposed
2	Kanhan	Raywadi	3.37	- -	More than 500 m	No	4770	Sand	Proposed
3	Kanhan	Rohana	2.10	- -	More than 500 m	No	3710	Sand	Proposed
4	Kanhan	Isapur A	3.6	- -	More than 500 m	No	6042	Sand	Proposed
5	Kanhan	Karajghat	3.52	- -	More than 500 m	No	4982	Sand	Proposed
6	Kanhan	Bawangaon A	1.36	- -	More than 500 m	No	2747	Sand	Proposed
7	Kanhan	Ramagongri B	4.0	- -	More than 500 m	No	4240	Sand	Proposed
8	Kanhan	Gosewadi A	4.80	- -	More than 500 m	No	7420	Sand	Proposed
9	Kanhan	Bawangaon B	2.70	- -	More than 500 m	No	5724	Sand	Proposed
Parseoni									
10	Pench	Ghatrohana	3.00	- -	More than 500 m	No	4240	Sand	Proposed
11	Kanhan	Sihora	4.50	- -	More than 500 m	No	4770	Sand	Proposed
12	Pench	Waghoda	4.0	- -	More than 500 m	No	12746	Sand	Proposed

13	Pench	Yesamba	1.57	- -	More than 500 m	No	5008	Sand	Proposed
14	Pench	Garanda	3.20	- -	More than 500 m	No	7915	Sand	Proposed
15	Pench	Pipla	1.93	- -	More than 500 m	No	2734	Sand	Proposed
16	Pench	Palora B	2.00.	- -	More than 500 m	No	2826	Sand	Proposed
17	Kanhan	Singardip	4.40	- -	More than 500 m	No	4664	Sand	Proposed
18	Kanhan	Juni Kamptee(Gadegaon)	2.00	- -	More than 500 m	No	5653	Sand	Proposed
19	Kanhan	Pardi k	4.50	- -	More than 500 m	No	12720	Sand	Proposed
20	Pench	Saholi A	2.50	- -	More than 500 m	No	7067	Sand	Proposed
21	Pench	Saholi B	3.60	- -	More than 500 m	No	12720	Sand	Proposed
Mauda									
22	Kanhan	Kirnapur	4.95	- -	More than 500 m	No	14021	Sand	Proposed
23	Kanhan	Mohkhedi	4.9	- -	More than 500 m	No	12120	Sand	Proposed
24	Kanhan	Chiknaghat	4.86	- -	More than 500 m	No	10303	Sand	Proposed
Kamptee									
25	Kanhan	Ungaon	4.55	- -	More than 500 m	No	5098	Sand	Proposed
26	Kanhan	Chikna A	2.25	- -	More than 500 m	No	3975	Sand	Proposed
27	Kanhan	Neeri	4.85	- -	More than 500 m	No	25754	Sand	Proposed
Kuhi									
28	Kanhan	Chichghat	3.0	- -	More than 500 m	No	5300	Sand	Proposed

Annexture 3

Cluster & Contiguous details

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta /Land)	Village	Area(In Ha)	Tatal Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/ patta/Land)	Village	Area(In Ha)	Tatal Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Details of Sand Ghats (River bed) eligible in 2021-2022:

List of Sand Ghat in the district were finalized for the auction in 2021-2022. The details of there are as follows:

Sr No.	Taluka	Village	Name of Sand Ghat	Adjacent Survey Number of Sand Ghat	Name Of River	Length (Meter)	Width (Meter)	Area (Hector)	Depth	Brass
1	Saoner	Gosewadi	Gosewadi A	285,286,287part	Kanhan	420	100	4.20	0.50	7420
2	Saoner	Bawangaon	Bawangaon B	203,204,208	Kanhan	450	60	2.70	0.60	5724
3	Parseoni	JuniKamptee(Gadegaon)	JuniKamptee(Gadegaon)	241/2,230	Kanhan	200	100	2.00	0.80	5653
4	Parseoni	Pardi	Pardi k	153	Kanhan	450	100	4.50	0.80	12720
5	Parseoni	Saholi	Saholi A	15,16,17,18,19	Kanhan	500	50	2.50	0.80	7067
6	Parseoni	Saholi	Saholi B	115/2,112/2, 136/2,141/2	Kanhan	600	60	3.60	1.00	12720
7	Mauda	Kirnapur	Kirnapur	103,104,105,107,109 ,110,111,113,115,116,117,118,119,4,5	Kanhan	620	80	4.95	0.80	14021
8	Mauda	Mohkhedi	Mohkhedi	117,118,119	Kanhan	490	100	4.9	0.70	12120
9	Kampthe	Neeri	Neeri Ghat	217/2/3,219,220,221 /1/2,223,224/1 Part	Kanhan	565	86	4.85	1.50	25754
10	Kuhi	Chichghat	Chichghat	43 area2.08 ha	Kanhan	300	100	3.00	0.50	5300

Sr No.	Taluka	Village	Name of Sand Ghat	Adjacent Survey Number of Sand Ghat	Name Of River	Length (Meter)	Width (Meter)	Area (Hector)	Depth	Brass
11	Saoner	Wakodi	Wakodi	44part	Kanhan	500	70	3.50	0.40	4946
12	Saoner	Raywadi	Raywadi A	179,180,183,184,186, 185&188 part	Kanhan	450	75	3.37	0.40	4770
13	Saoner	Rohana	Rohana	168,3part 7B part	Kanhan	350	60	2.10	0.50	3710
14	Saoner	Esapur	Esapur A	90part, 93,94,115,116	Kanhan	475	80	3.80	0.45	6042
15	Saoner	Karajghat	Karajghat	15part	Kanhan	470	75	3.52	0.40	4982
16	Saoner	Bawangaon	Bawangaon A	252,253	Kanhan	243	80	1.94	0.40	2747
17	Saoner	Ramadongri	Ramagongri B	144part, 143 Part	Kanhan	400	100	4.0	0.30	4240
18	Parseoni	Ghatrohana	Ghatrohana	Part53,52,46,45 Part	Pench	500	60	3.00	0.40	4240
19	Parseoni	Sihora	Sihora	170/1,170/2 part	Kanhan	500	90	4.50	0.30	4770
20	Parseoni	Waghoda	Waghoda	127/1 part	Pench	334	120	4.0	0.90	12746
21	Parseoni	Yesamba	Yesamba	207 part	Pench	210	75	1.57	0.90	5008
22	Parseoni	Garanda	Garanda	104 part	Pench	400	80	3.20	0.70	7915
23	Parseoni	Pipla	Pipla	354 part,353 part	Pench	215	90	1.93	0.40	2734
24	Parseoni	Palora	Palora B	43 part	Pench	250	80	2.00.	0.40	2826
25	Parseoni	Singardip	Singardip	80,81,82	Kanhan	550	80	4.40	0.30	4664
26	Mauda	ChiknaGhat	Chiknaghat	543/1,542,541,543/2	Kanhan	540	90	4.86	0.60	10303
27	Kampthe	Chikna	Chikna A	8,9/1,9/2,10/1,10/2,11,12part	Kanhan	450	50	2.25	0.50	3975
28	Kampthe	Ungaon	Ungaon	212,217,218,219,222,211 part	Kanhan	650	74	4.81	0.30	5098

SAND GHAT SITE SPECIFIC ENFORCEMENT & MONITORING PLAN AS PER GUIDELINES STIPULATED IN ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING ISSUED BY MOEF&CC IN JANUARY 2020

Sr. No.	Condition as per E & M guidline	Compliance
1	Three-member committee for environmental audit	District Magistrate formed a committee for monitoring of compliances as per EM guidelinesafter grant of prior Environmental Clearance.
2	LOI should be preferably granted to those locations which have least possibility of an impact on the environment and nearbyhabitation	Environmental feasibility will be checked before issuance of LOI.
3	Identification of sand Ghats its quantification and feasibility considering various environmental parameters like proximity of protected are, wetlands, creeks, forest etc. and other factors such as places of archaeological importance, habitation, prohibited area etc.	All sand ghat locations are physically surveyed by technical committee as per Government of maharstra revised sand policy dated 3.09.2021 and ensured that all the parameters regarding sustainable sand mining is followed.
4	Mining plan and its initial level of mining leases at shorter interval say 10m x 10 m	Mining plans are approved by DGM, Nagpur. It is Ensuerd that Mining plan and its initial level of mining leases at shorter interval 10m x 10 m showingin surface plan
5	Responsibility of mine owner to obtain all statutory clearances	It will be ensured by District administration before commencement of mining.
6	Emphasis of district survey report and its format of reporting	Draft DSR is published on district portal dated 09/11/2021 in accordance with format given in notification dated 25 July 2018.
7	Regular replenishment study to ascertain rate of depositing, plan and section needs to be prepared.	It is Ensured that regular replenishment study to ascertain rate of depositing, plan and section to be prepared.
8	Movement of transportation of mineral from mining area to end user needs to monitor.	It will be ensured by using IT enabled services as per guidelines.
Preparation of District Survey Report		
9	Preparation of District Survey Report	DSR is prepared as per format S.O. 3611(E) dated 25.07.2018 and EM guidelines 2020 issued by MoEF&CC. New Delhi
10	Publication of District Survey Report	Draft DSR published on district portal for public Inventory of river bed material s in the district comments.

11	Development of inventory of river bed material and other sources in the district.	Attached as Annexure I to V as per EM guidelines 2020
12	District Survey Report is prepared in such a way that it is not only identifies the mineral bearing area but also defines mining and no mining zones Considering environmental and social factors.	All the parameters are covered in final DSR.
13	Identification of sources of Sand and M-sand, De silting Locations, river type perennial or non perennial, village, tehsil, agriculture/nonagricultural land, M-sand plant etc.	Attached as Annexure-1, II and V
14	Defining the sources of Sand for identification of the potential area, entire river stretch needs to be recorded and area of aggradations/deposition needs to be ascertaining by comparing the level difference between outside river bed OGL and Water Level.	Areas of deposition are identified and levels are recorded for actual replenishment.
15	Boundary Pillars needs to be erected after identification of an area of aggradation and deposition outside bank of river at safe location for future survey.	Geographical co-ordinates of leases are marked on google Earth for future reference and to
16	Identifying mining and no mining zone shall Follow sensitively.	It is ensured that the mining activity and no mining zone shall be followed sensitively by mine owner
17	Demand and Supply for river bed material through market survey	Demand and supply is mentioned in the report on the basis of actual demand of various departments in the District and RBI's index. Based method which is given in Chapter 4.
18	Cluster situation shall be examined.	As per the sand mining is concerne there is no cluster situation in the District.
19	Mining outside river bed area on Patta/Khatedari land be granted when there is possibility of replenishment of material For govt. projects mining could be allowed on Patta/Kahtedari land but mining should be done by Govt. agencies and material shall not be used for sale.	There is no sand mining outside the River bed.
20	State Govt. should define transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely	It is ensured that transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely
21	List of recommended sites in the format Annexure-II, Details of Cluster in Annexure-III and transportation route in Annexure IV needs to be provided	Attached as Annexure- II, III and IV
22	Public Consultation	Public consultation will be conducted
23	Grant of Letter of Intent for leases falling in potential zone	After getting all the statutary clearance of sand ghats it will be auctioned as per sand

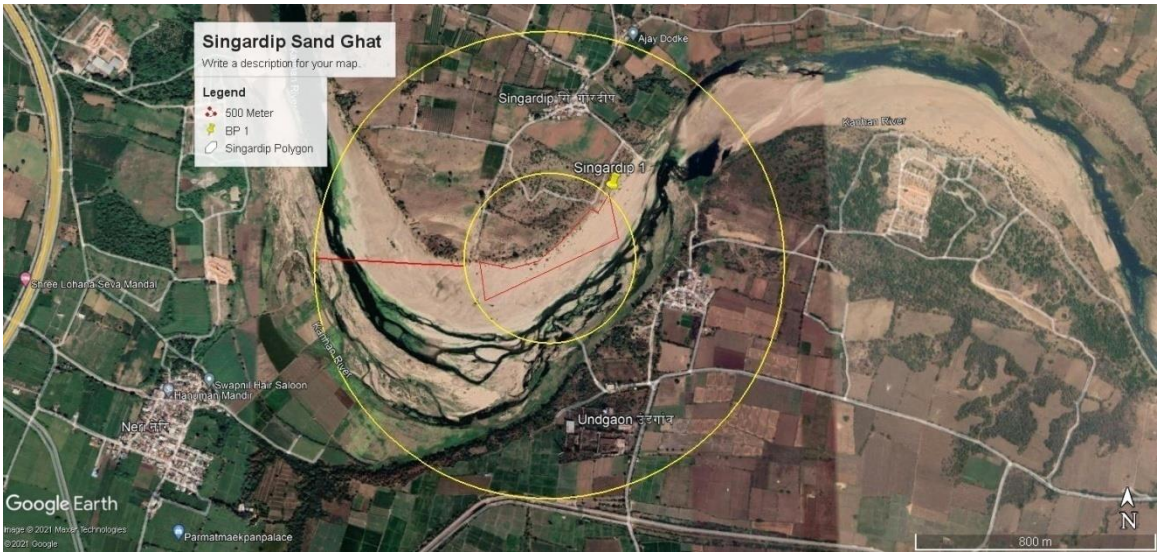
		mining policy of State Govt. dated 30.09.2019
24	The mining plan should include the original ground level recorded at an interval not more than 10 m x 10m along and across the length of river	Surface plan is prepared keeping OGL, at an interval of 10 mx 10 m across length of river.
25	In addition to this outside mine lease and bank of river up to meter needs to be recorded	Details are given in Annexure-VII
26	Time period of monsoon should be defined in the DSR/MP.	Time period of monsoon is defined as 10th June 30th September of every year during which scooping of sand is not allowed.
27	Details of replenishment needs to be included in the mining plan	Preparation of mining plan is done on the basis of established thickness.
28	Parts of river reach that experience deposition or aggradations shall be identified Leaseholder/Environmental clearance holder may be allowed to extract the sand and gravel deposit in these locations to aggradations problems	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
29	Distance of sites for sand and gravel mining shall be depending on replenishment rate of river. Sediment rating curve shall be developed and checked against extracted volume of sand and gravel	All the parameters are covered in the replenishment study.
30	Sand and gravel may be extracted across the I entire active channel during dry season	It will be ensured before commencement of Mining
31	Abandoned stream channels on the terrace and inactive flood plains are preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form inactive channel.	All sand ghat are exposed during non-monsoon period and their deltas and flood plains. The stream should not to diverted to form inactive channel.
32	Layers of sand and gravel which could be removed from river bed shall depend on width of river and replenishment rate of the river.	It is ensured by the technical committee,and Mineable depth is decided after physical survey and there is no possibility of adverse impacts on River morphology
33	Sand ghat shall not be allowed to be extracted where erosion may occur such as concave bank	it is ensured by Technical committee,All the sand ghat locations are Depositional or Aggradation areas and Sand ghat will not be allowed to be extracted where erosion may occur such as concave bank
34	Segment of braided river system should be used preferably falling within lateral migration area of river regime that enhances feasibility of sediment Replenishment.	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
35	Sand and gravel shall not be extracted from the bridge subjected to 250m on the upstream and 500 meter on downstream side	All sand ghat locations are at suitable distance form bridges as per Guidelines.

36	Mining depth should be restricted to 3 meters and distance from bank should be 1/4th of river width and should not be less than 7.5 meters	Mining depth is decided after physical survey conducted by technical committee and ensures that all the parameters is followed mentioned in the sand mining guidelines.
37	Demarcation of mining areas with pillars and dereferencing should be done prior to start of mining	All the sand ghat locations are demarcated and georeferenced.
38	A buffer distance of 50m after every block of 1000m over which mining is undertaken or at such distance as may be the directed prescribed by the regulatory authority shall be maintained	All the parameters are followed.
39	Obtaining Environmental Clearance and other statutory clearance	No mining will be done before grant of prior Environmental Clearance.
40	Baseline data before commencement of Mining Operations	It will be ensured that collection of baseline data before commencement of mining Operation.
41	Generic Structure of Replenishment Study	Replenishment study conducted scientifically and included in DSR
42	Particle size distribution and bulk density of deposited material to be assessed	It is followed

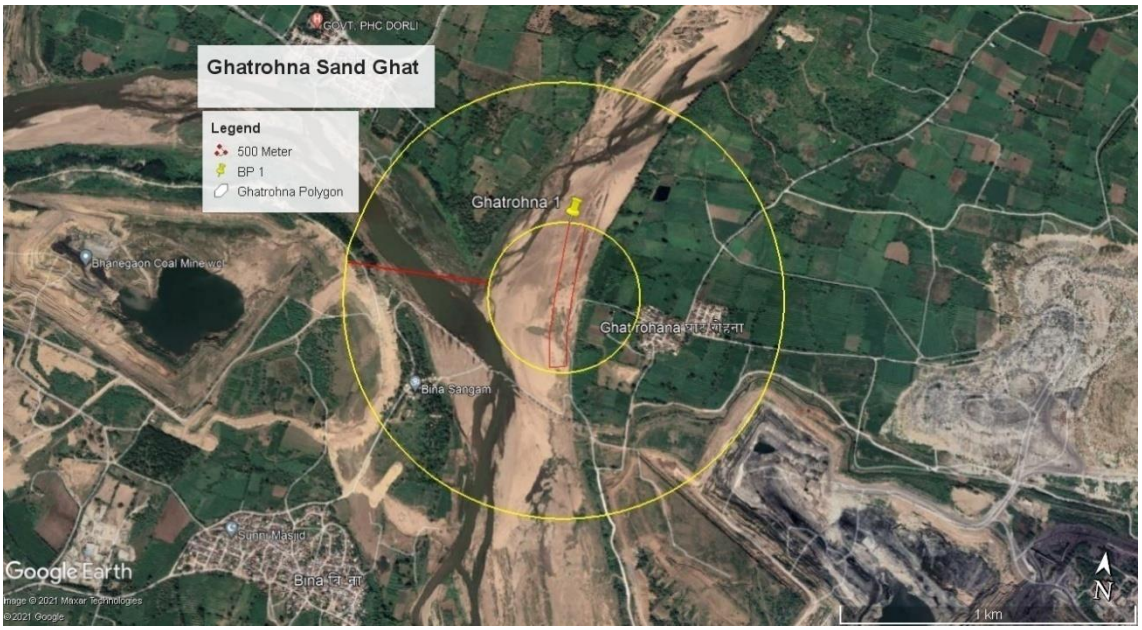
Location map of Proposed Nagpur District Sand Ghat

PIMPLA SAND GHAT

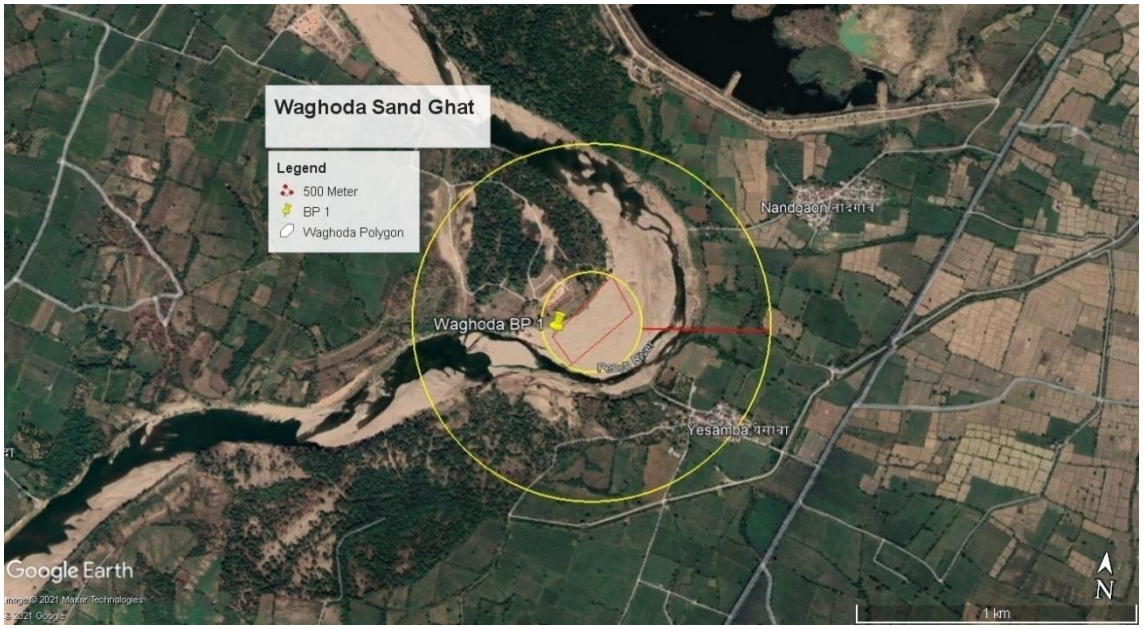
SINGARDIP SAND GHAT



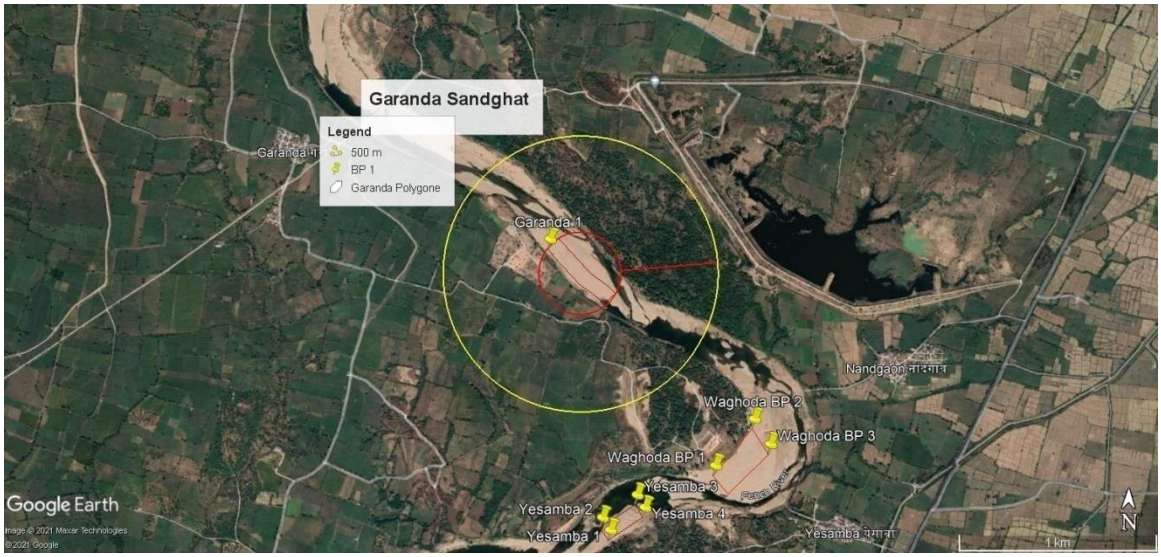
GHATROHNA SAND GHAT



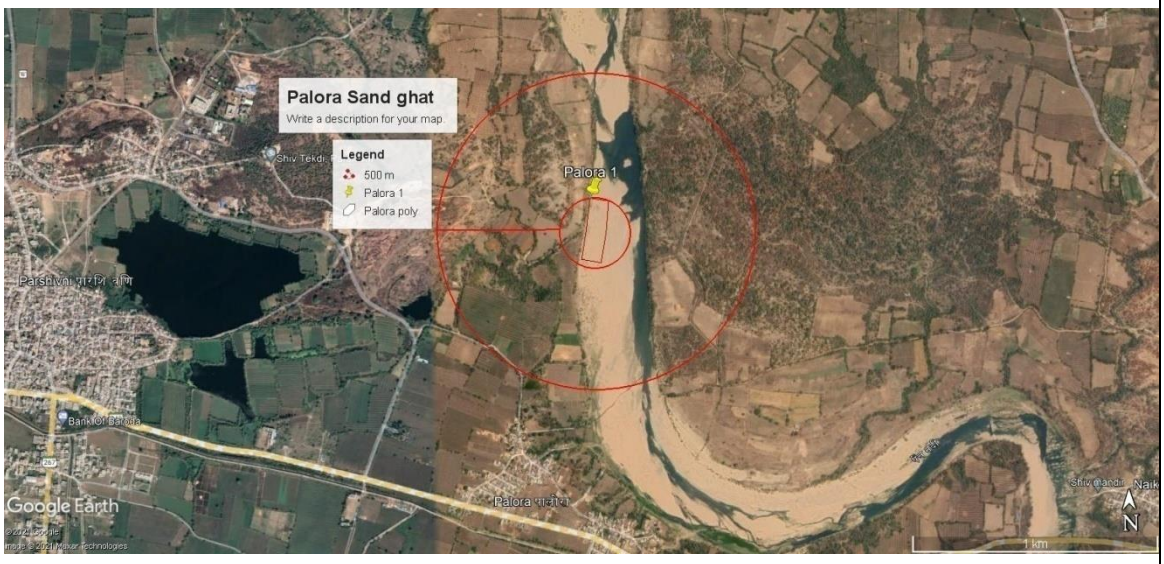
WAGHODA SAND GHAT



GARANDA SAND GHAT

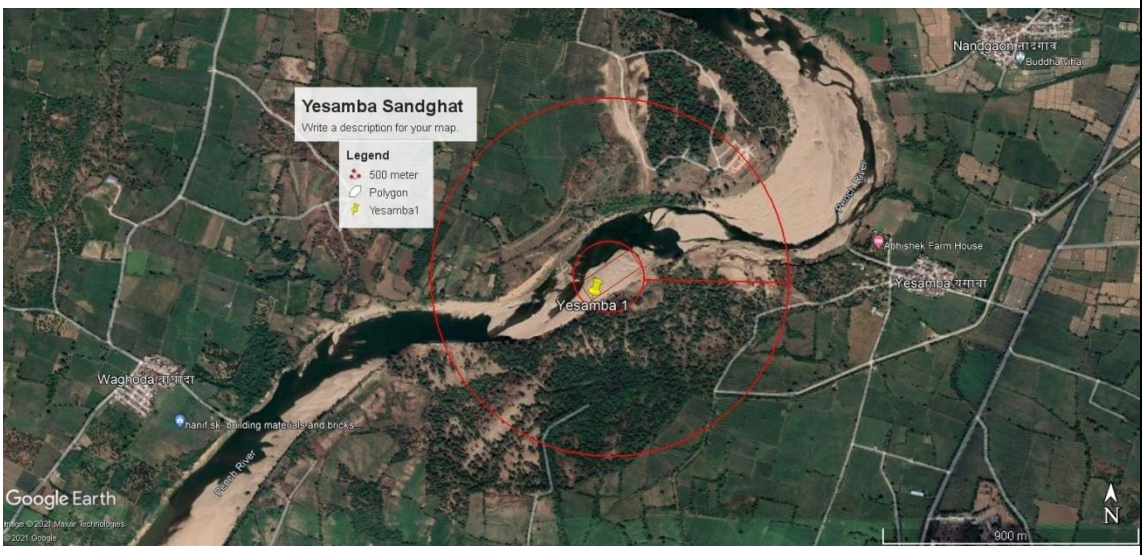


PALORA SAND GHAT

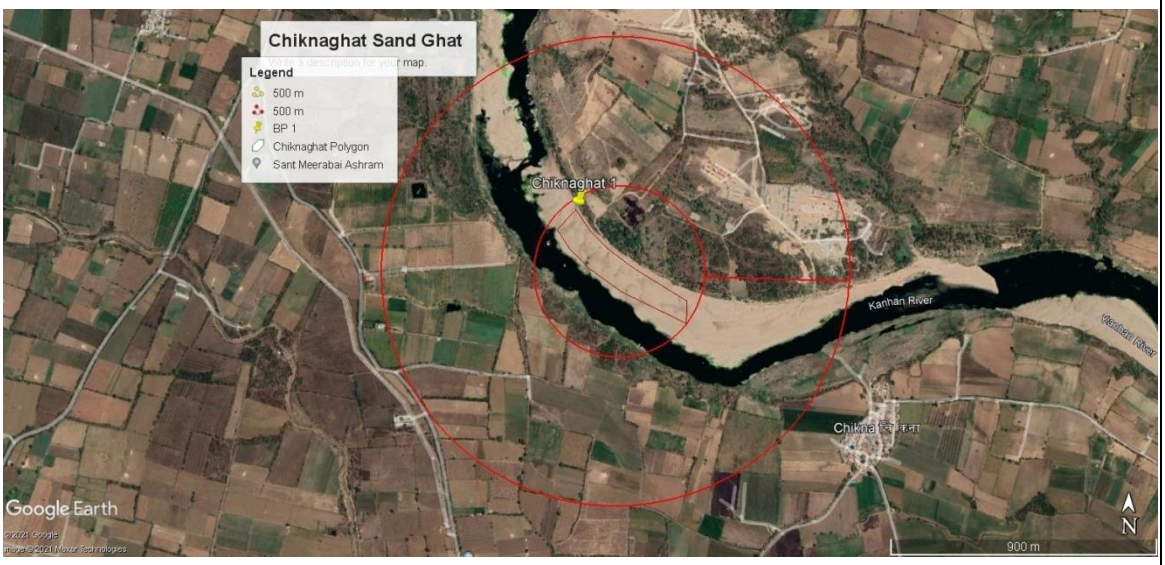


SIHORA SAND GHAT

YESAMBA SAND GHAT



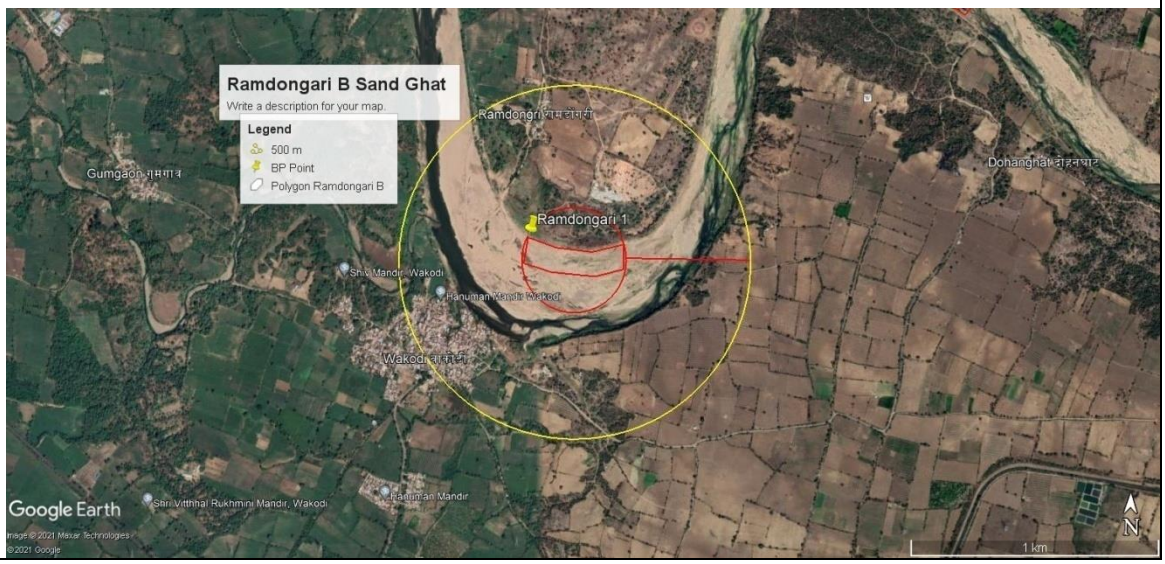
CHIKNAGHAT SAND GHAT



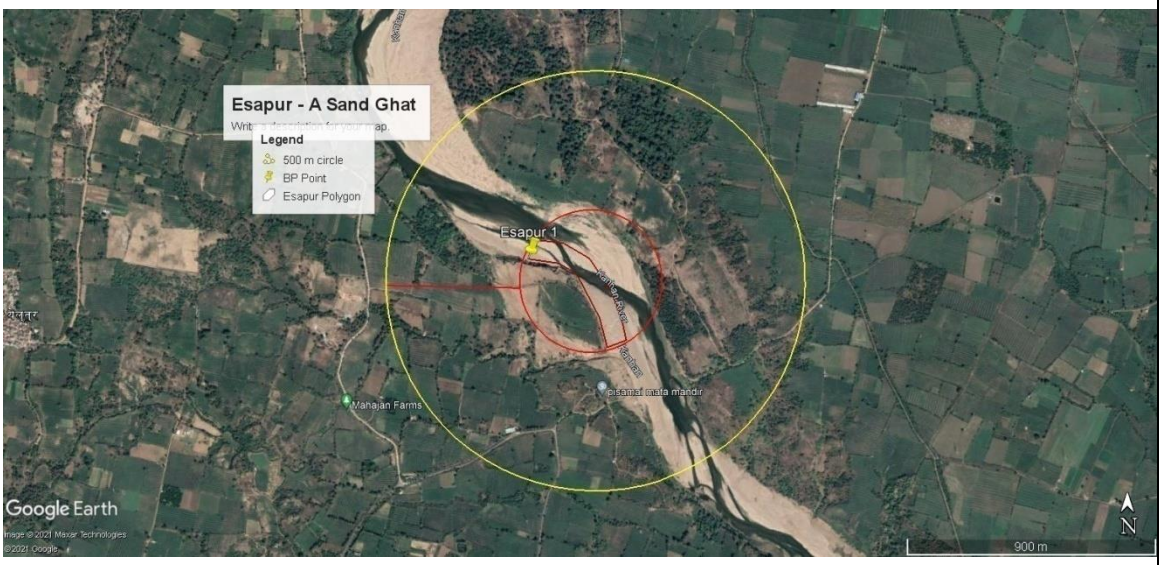
UNGAON SANDGHAT

KARAJGHAT SAND GHAT

RAMGONGRI B SAND GHAT



ESAPUR A SAND GHAT



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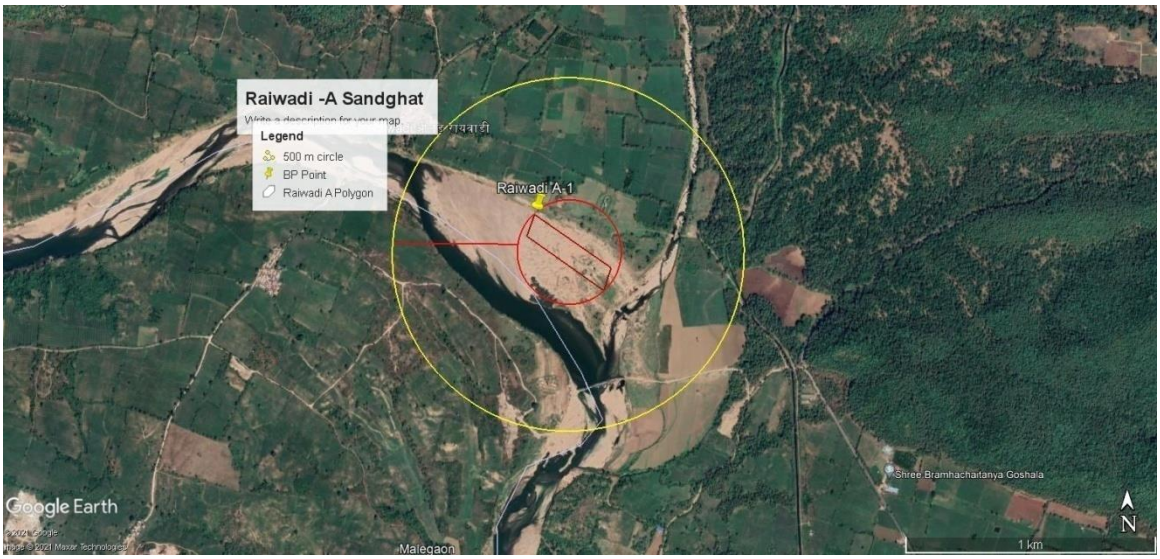
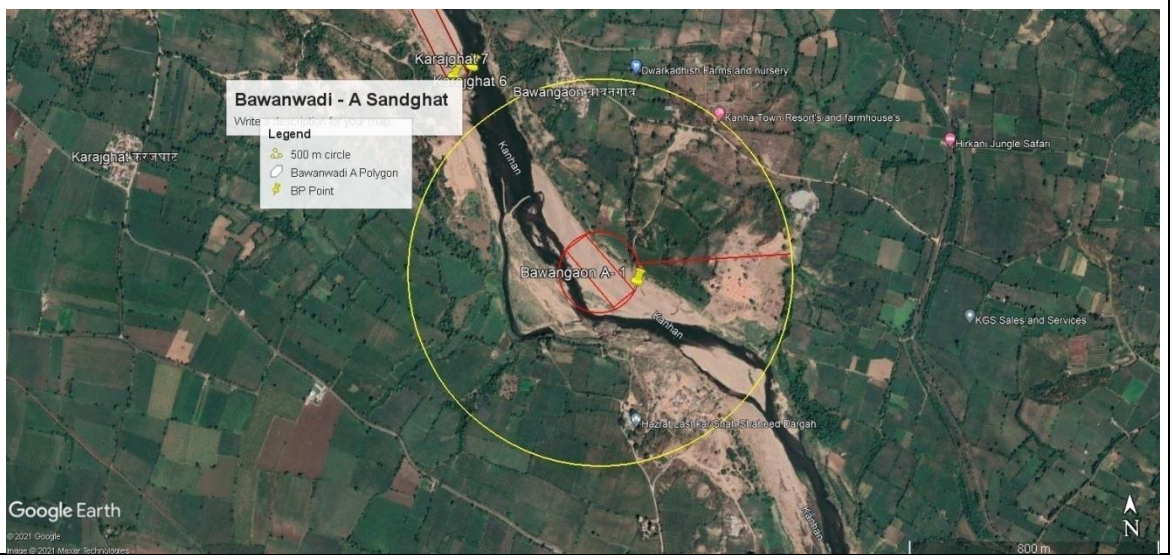


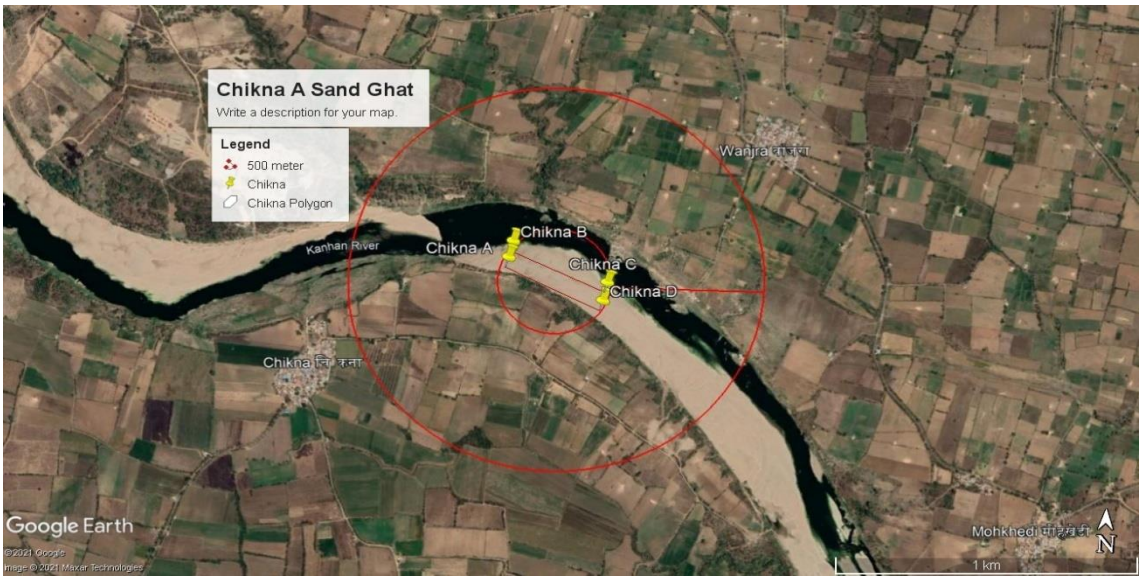
BAWANGAON A



ROHNA SAND GHAT

WAKODI SAND GHAT

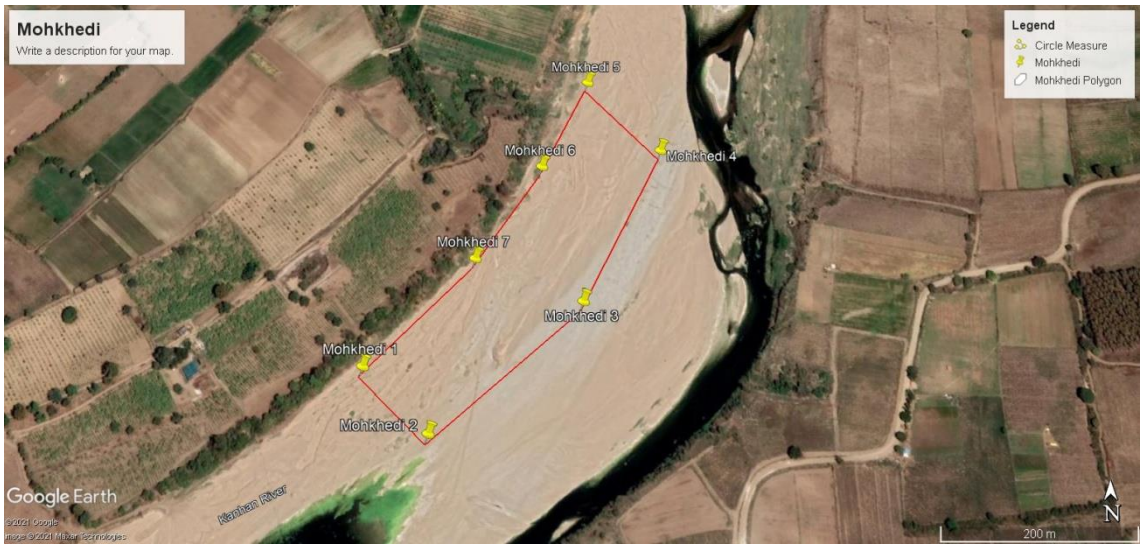
JUNI KAMTHEE SAND GHAT



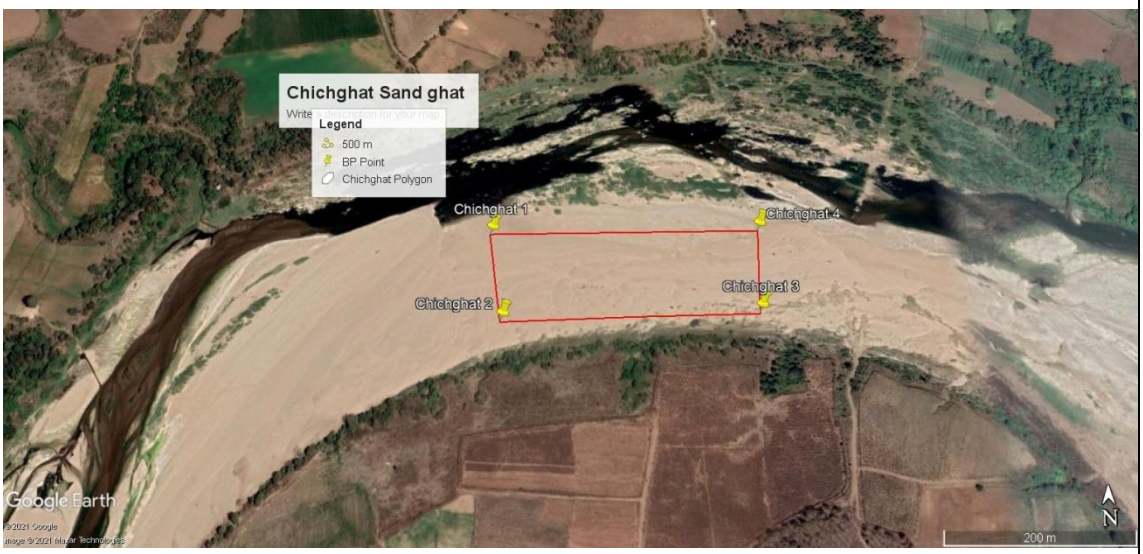
CHIKNA A SAND GHAT

SAHOLI B SAND GHAT

MOHKHEDI SAND GHAT



CHICHGHAT SAND GHAT



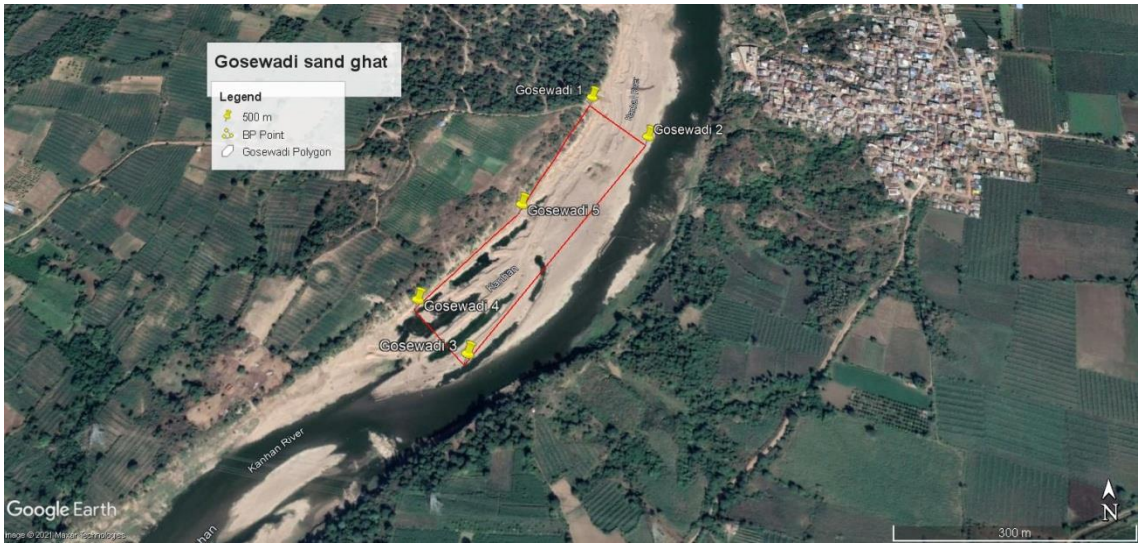
KIRNAPUR SAND GHAT

BAWANGAON B SAND GHAT

PARDI K SAND GHAT

NERI SAND GHAT

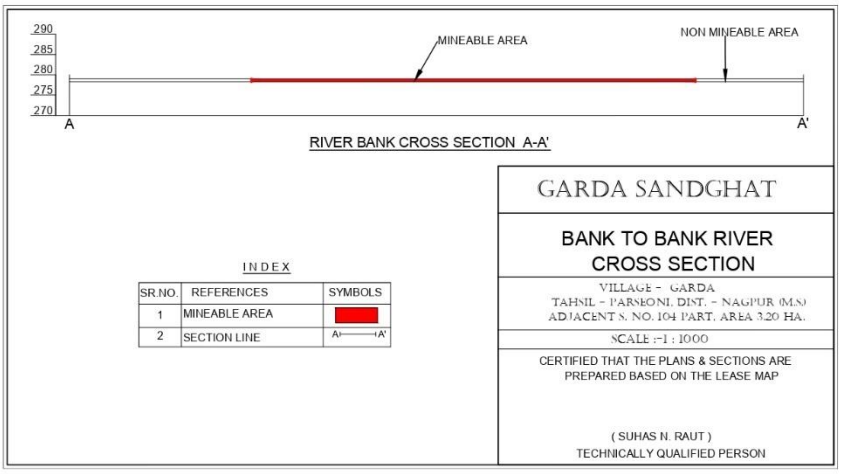
GOSEWADI SAND GHAT



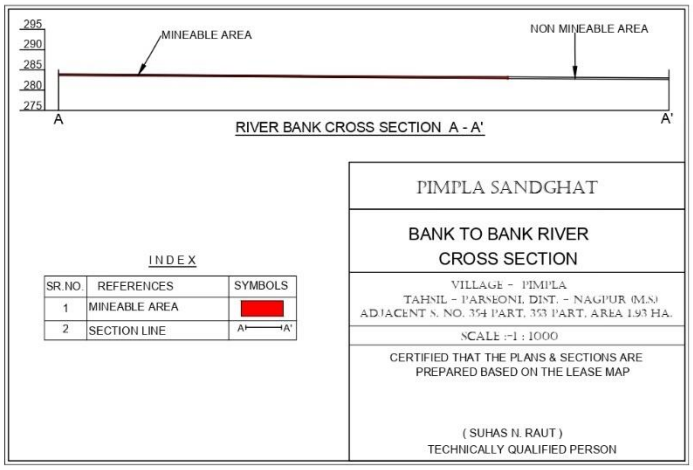
Annexure- VI

Bank To Bank Cross Section

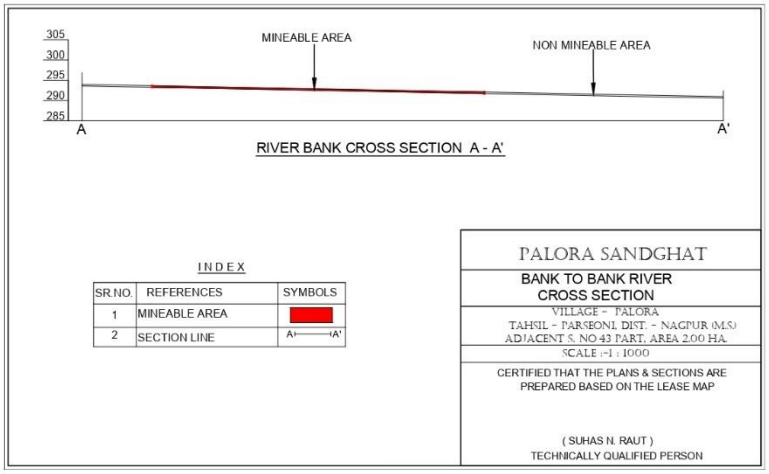
GARANDA SAND GHAT



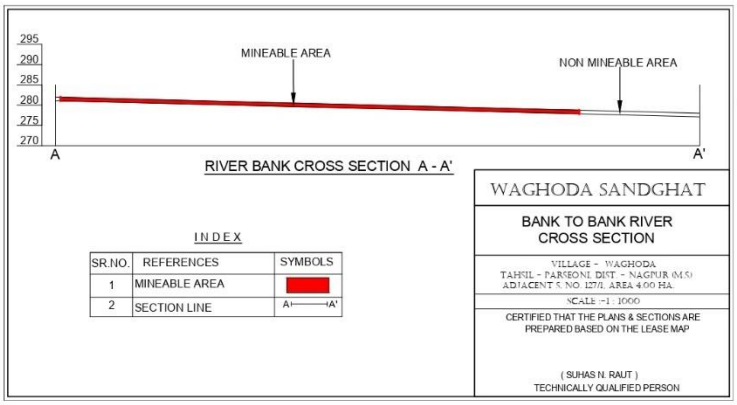
PIMPLA SAND GHAT



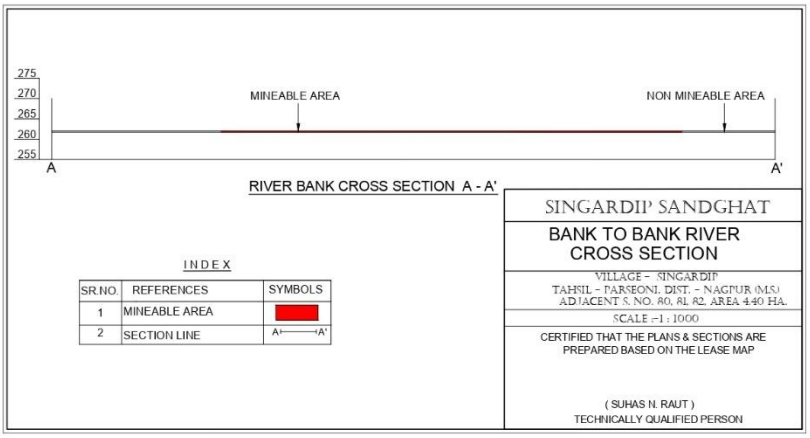
PALORA SAND GHAT



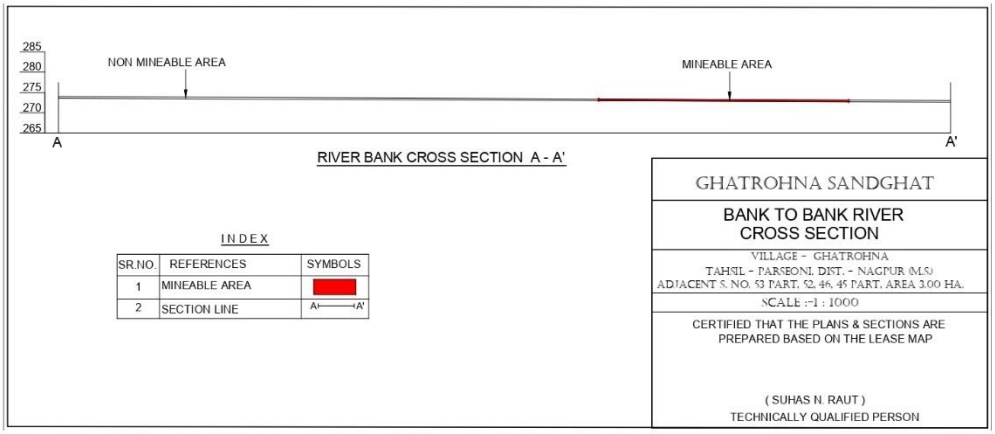
WAGHODA SAND GHAT



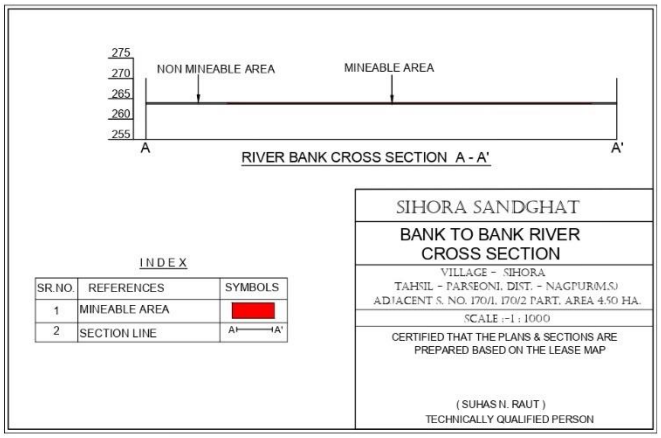
SINGARDIP SAND GHAT



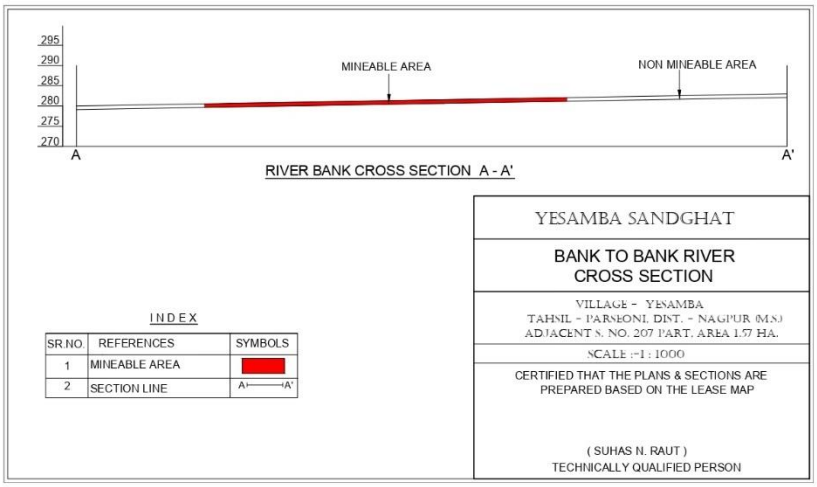
GHATROHNA SAND GHAT



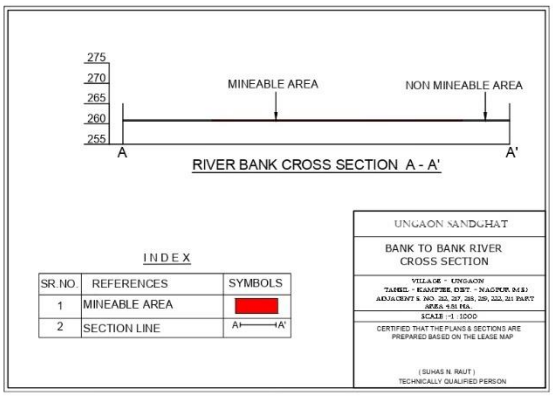
SIHORA SAND GHAT



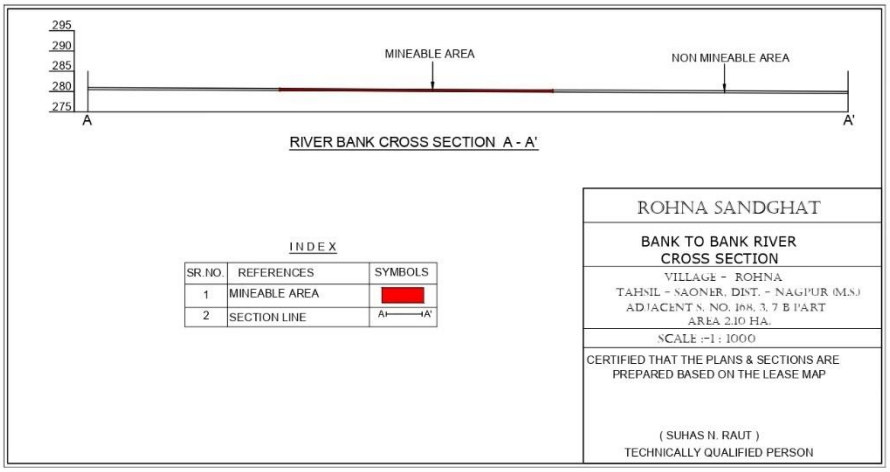
YESAMBA SAND GHAT



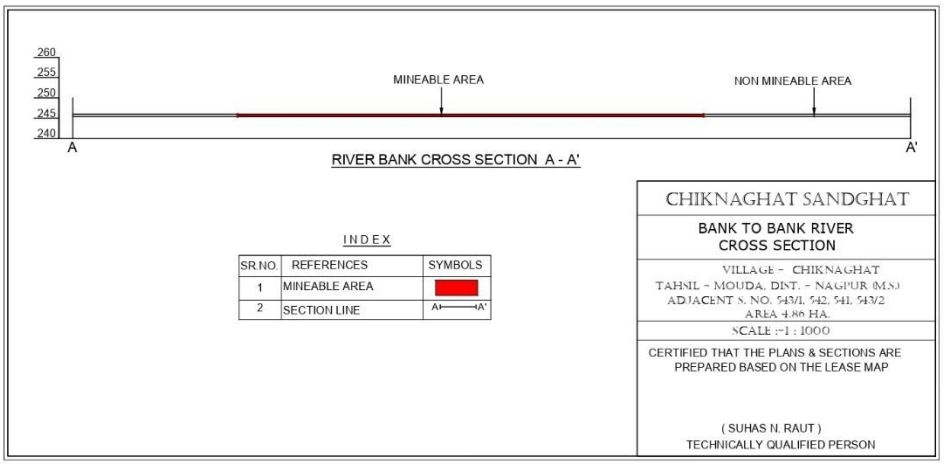
UNGAON SAND GHAT



ROHNA SAND GHAT



CHIKNAGHAT SANDGHAT



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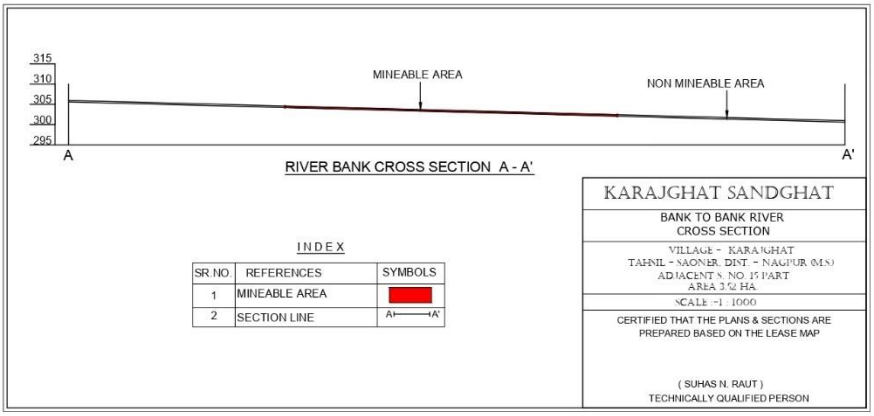
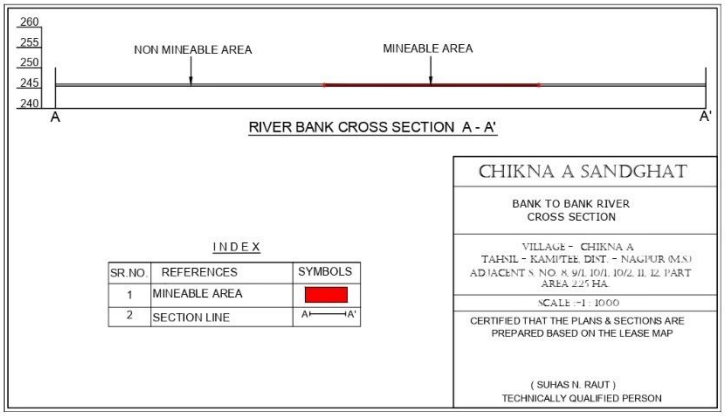
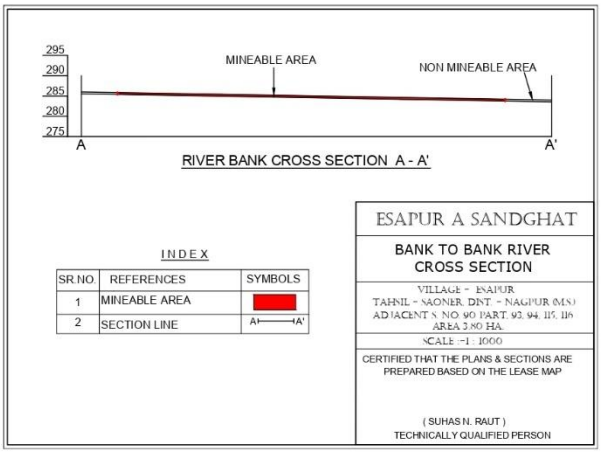


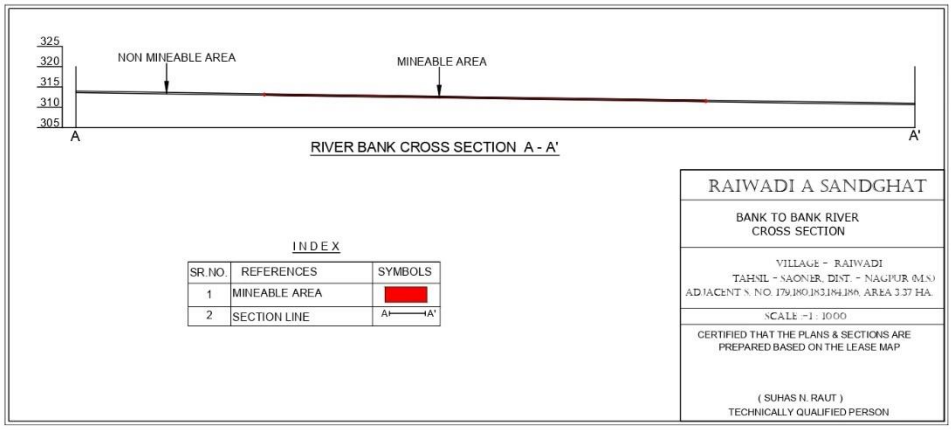
CHIKNA A


260
255
250
245
240
NON MINEABLE AREA
MINEABLE AREA
A
A'
RIVER BANK CROSS SECTION A - A'
INDEX
SR.NO.
REFERENCES
SYMBOLS
1
MINEABLE AREA
2
SECTION LINE
A
A'
CHIKNA A SANDGHAT
BANK TO BANK RIVER
CROSS SECTION
VILLAGE - CHIKNA A
TAHNIL - KAMPTEE, DIST. - NAGPUR (M.S.)
ADJACENT S. NO. 8, 9/1, 10/1, 10/2, 11, 12, PART
AREA 225 HA.
SCALE -1 : 1000
CERTIFIED THAT THE PLANS & SECTIONS ARE
PREPARED BASED ON THE LEASE MAP
(SUHAS N. RAUT)
TECHNICALLY QUALIFIED PERSON

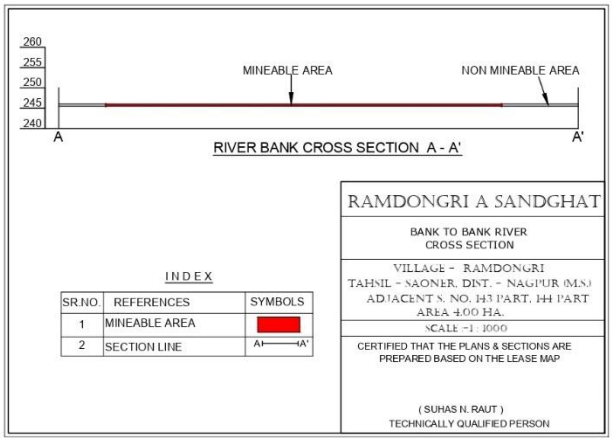
ESAPUR A


295
290
285
280
275
MINEABLE AREA
NON MINEABLE AREA
A
A'
RIVER BANK CROSS SECTION A - A'
INDEX
SR.NO.
REFERENCES
SYMBOLS
1
MINEABLE AREA
2
SECTION LINE
A
A'
ESAPUR A SANDGHAT
BANK TO BANK RIVER
CROSS SECTION
VILLAGE - ESAPUR
TAHSIL - SAONER, DIST. - NAGPUR (M.S.)
ADJACENT S. NO. 90 PART, 92, 94, 115, 116
AREA 3.80 HA.
SCALE :-1 : 1000
CERTIFIED THAT THE PLANS & SECTIONS ARE
PREPARED BASED ON THE LEASE MAP
(SUHAS N. RAUT)
TECHNICALLY QUALIFIED PERSON

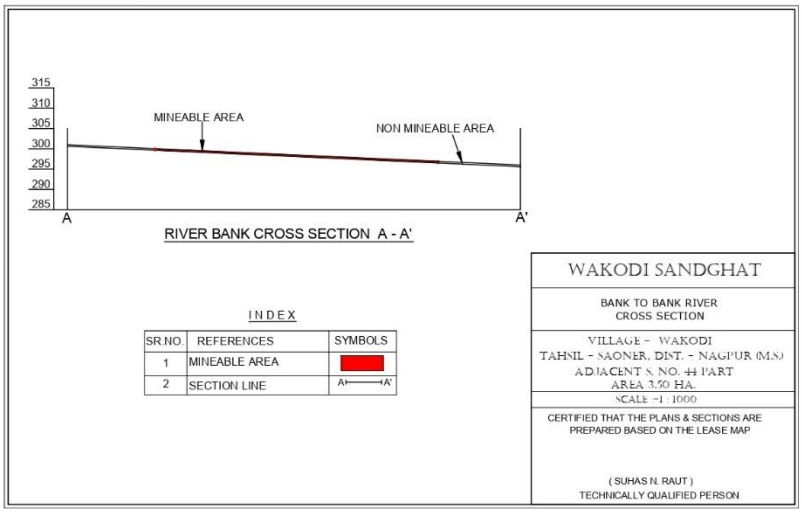
RAIWADI SAND GHAT



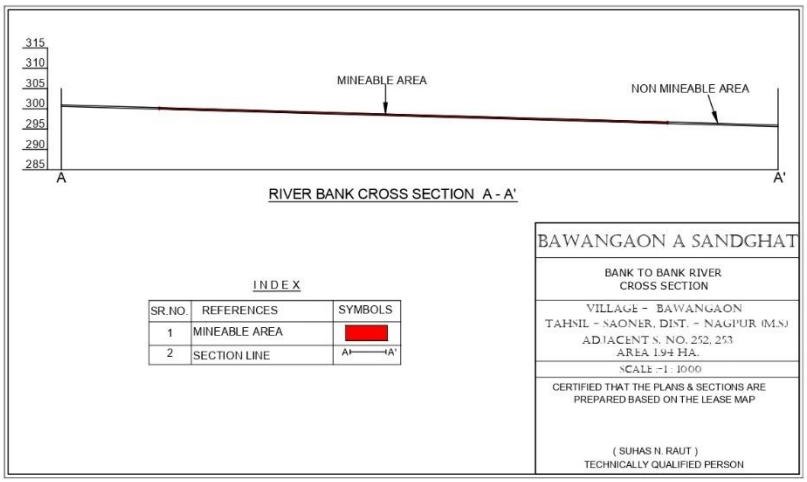
RAMDONDRI B SAND GHAT



WAKODI SAND GHAT



BAWANGAON A SAND GHAT



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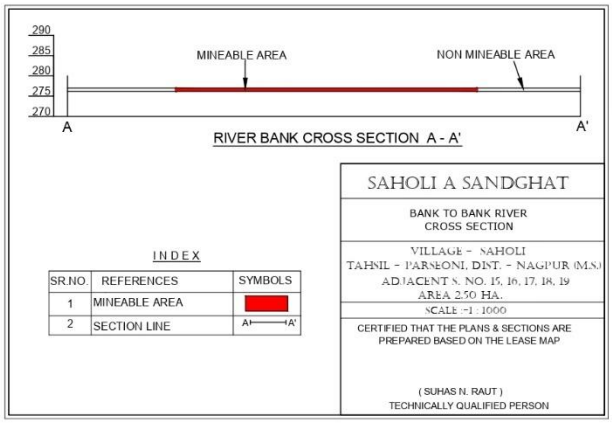
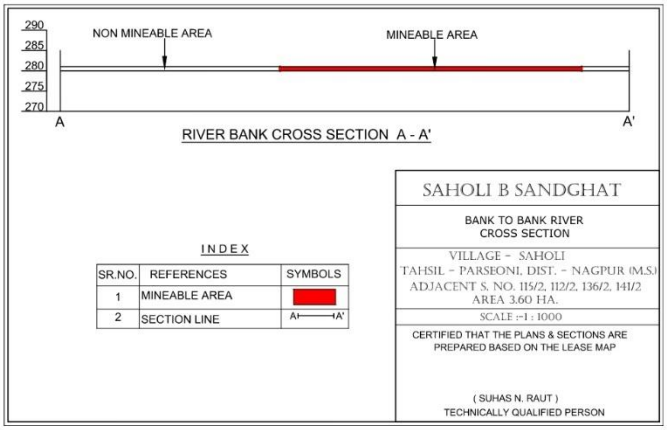
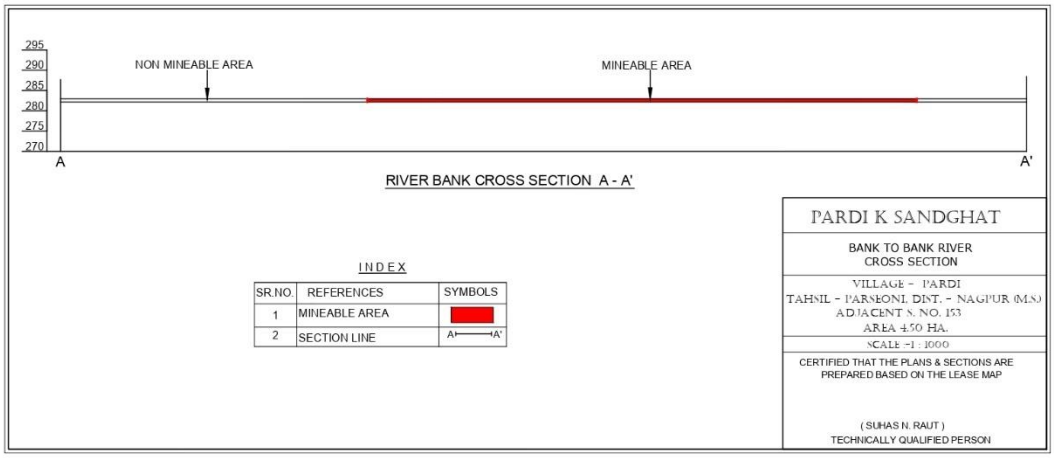


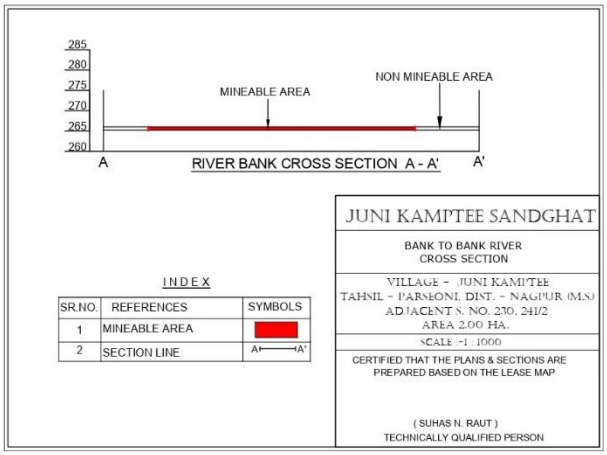
SAHOLI B SAND GHAT



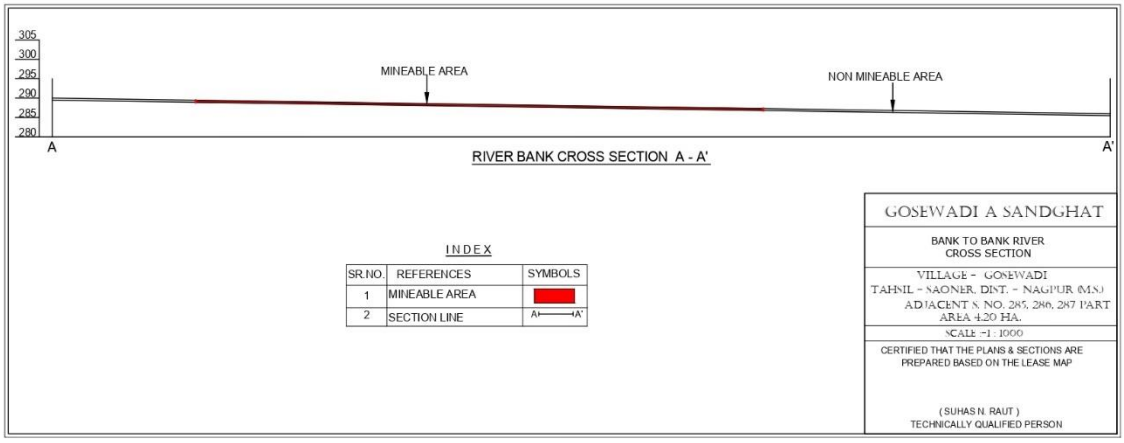
PARDI K SAND GHST



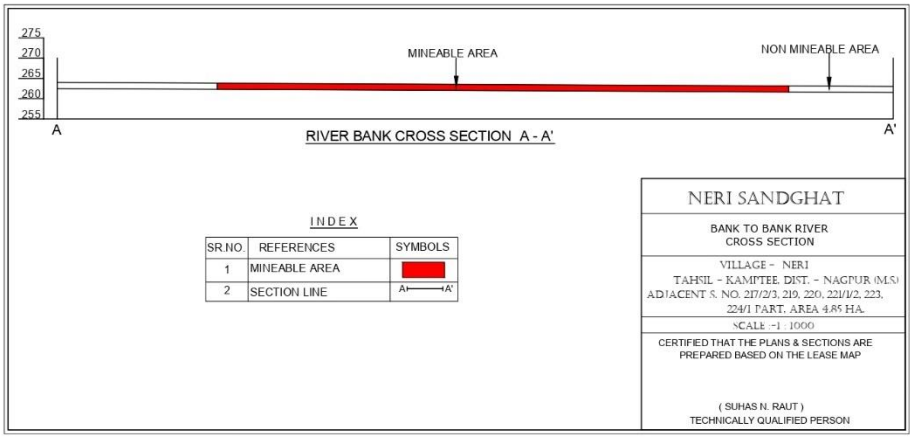
JUNI KAMPTEE SANDGHAT



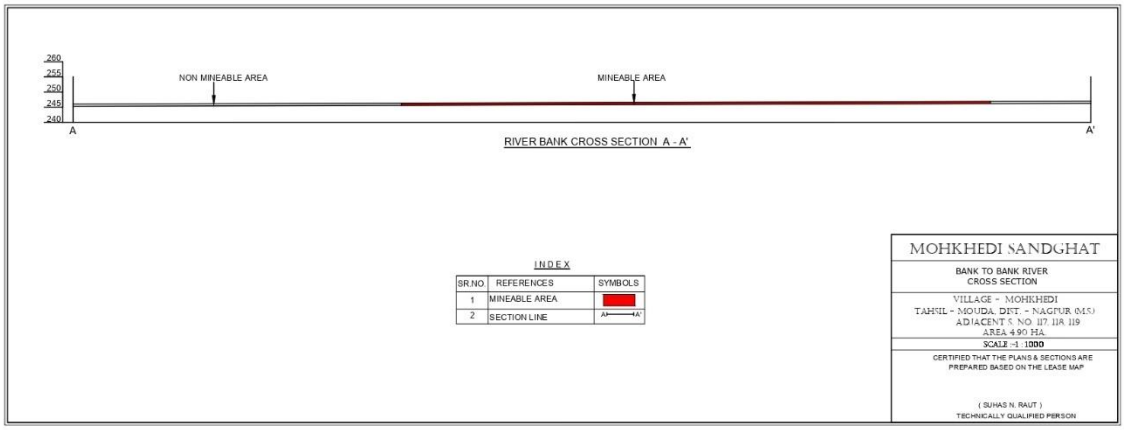
GOSEWADI A SAND GHAT



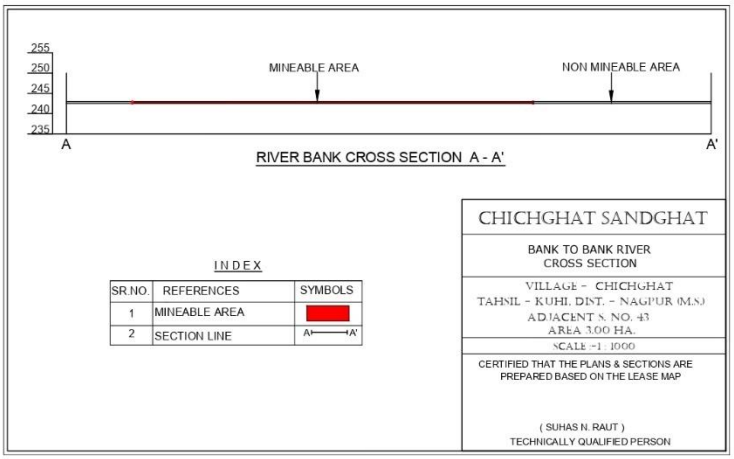
NERI SAND GHAT



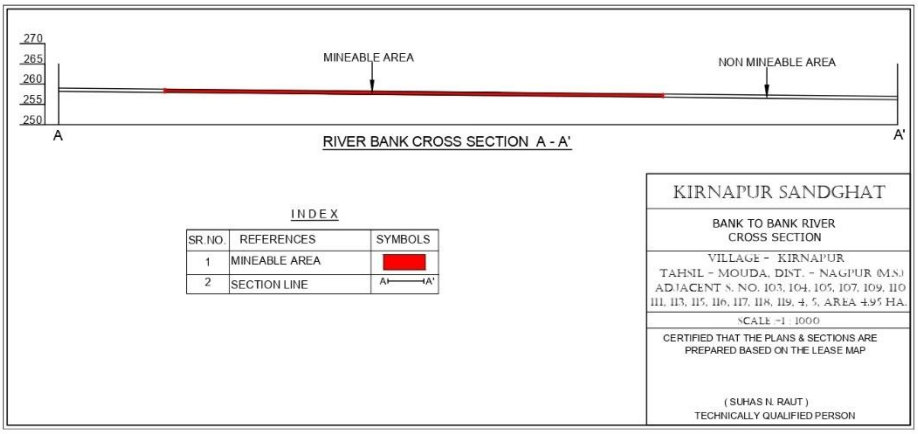
MOHKHEDI SAND GHAT



CHICHGHAT SAND GHAT



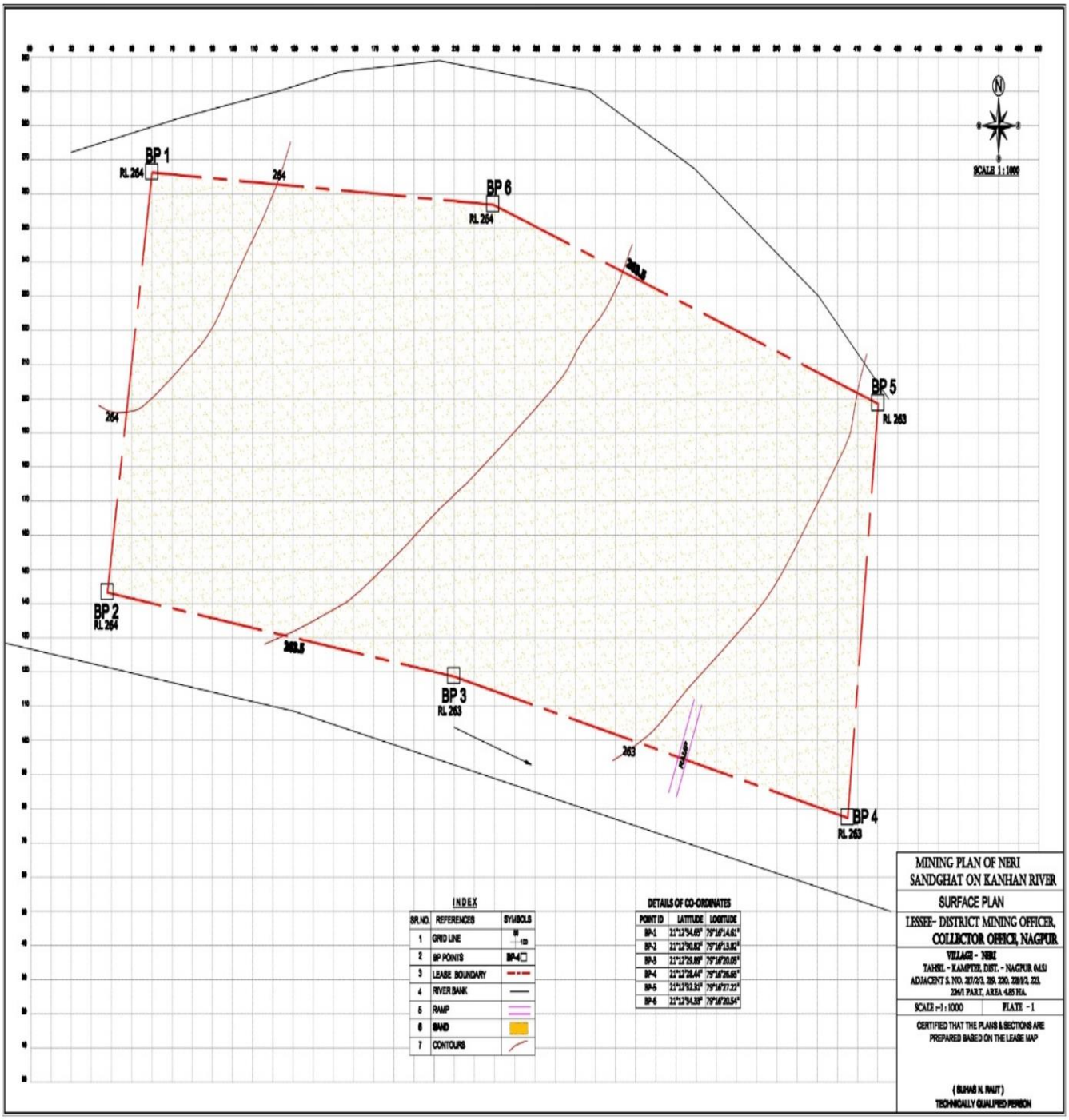
KIRNAPUR SAND GHAT



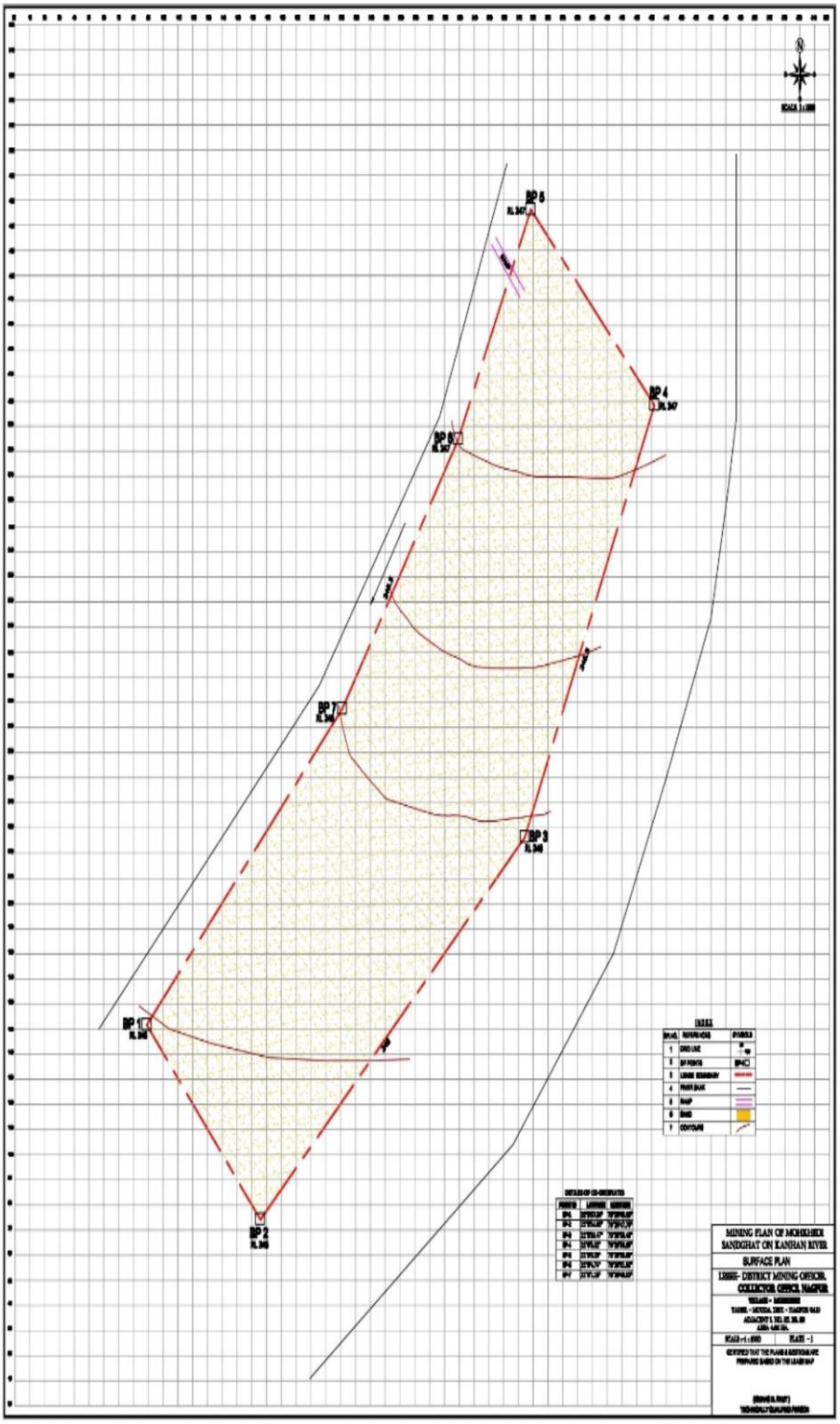
Annexure - VII

10*10 Grid Map

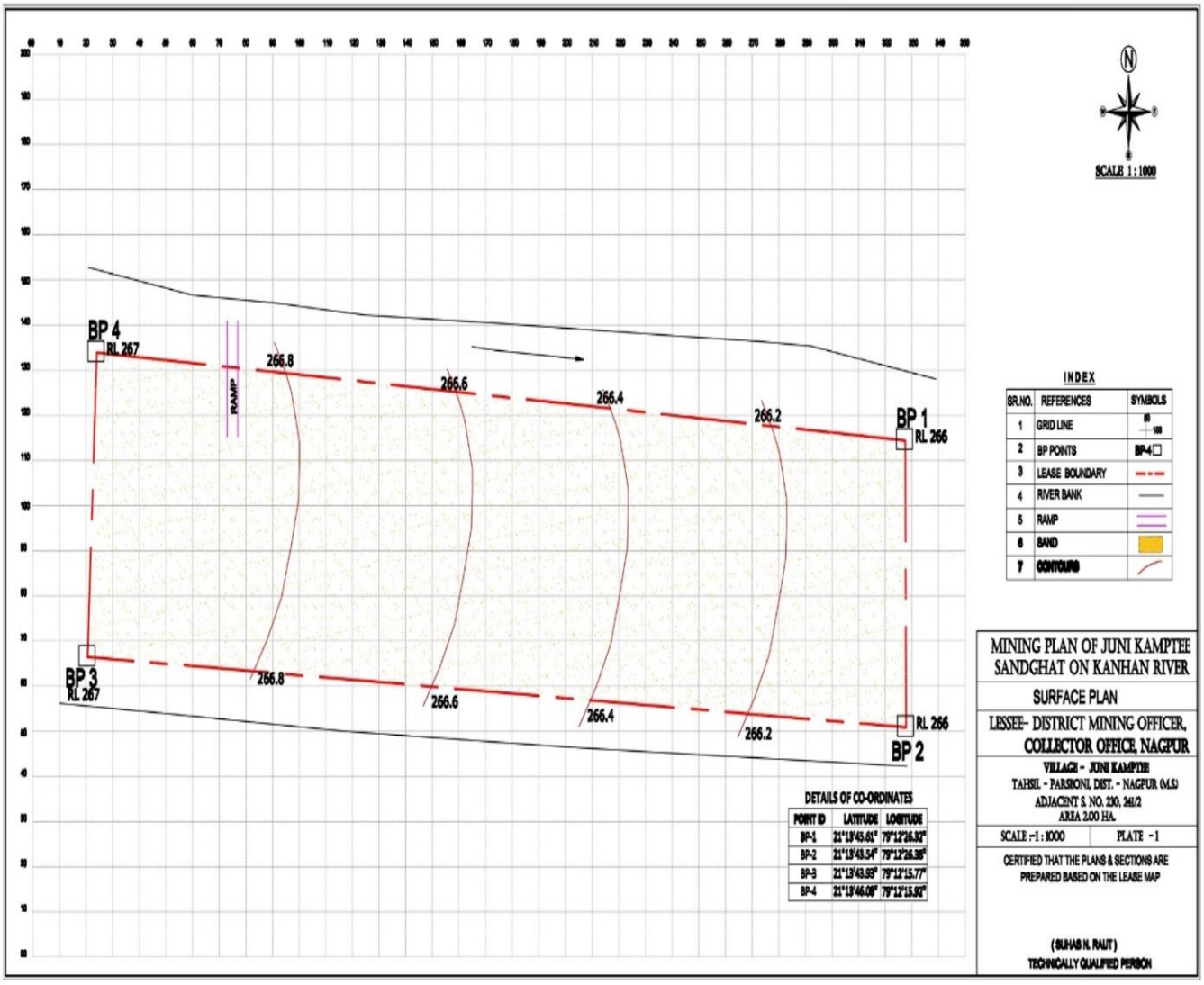
NERI SAND GHAT GRID MAP



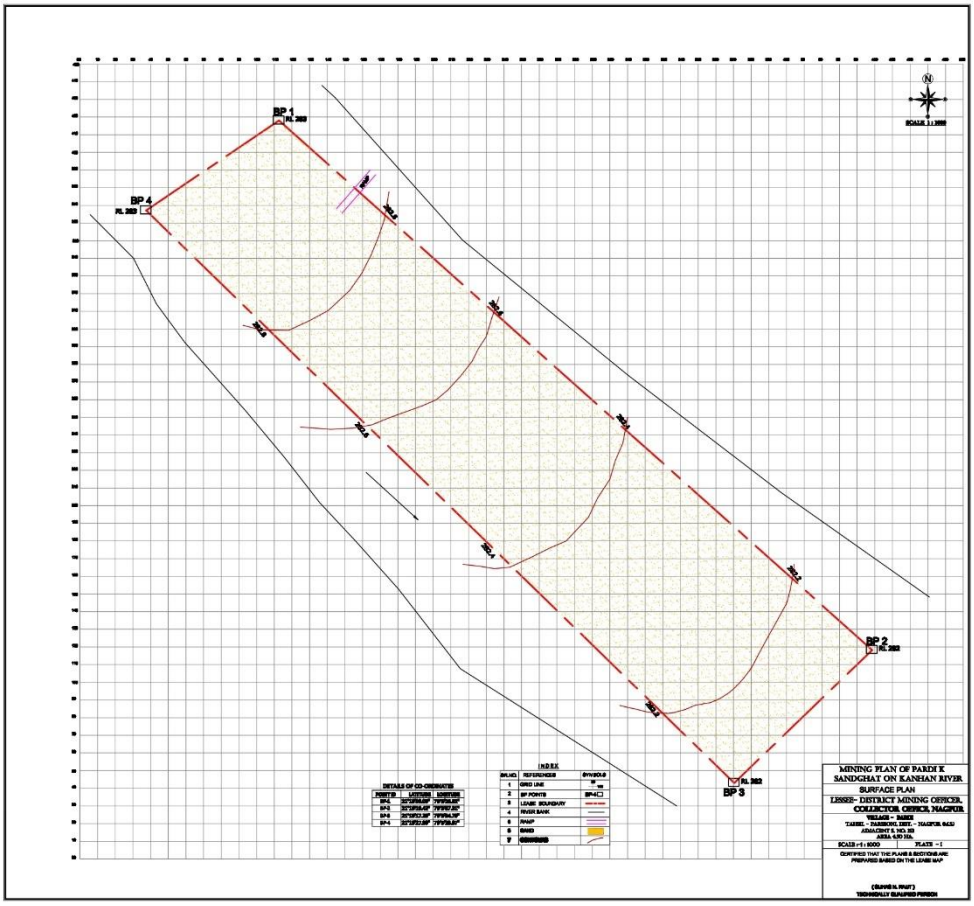
MOHKHEDI SAND GHAT GRID MAP



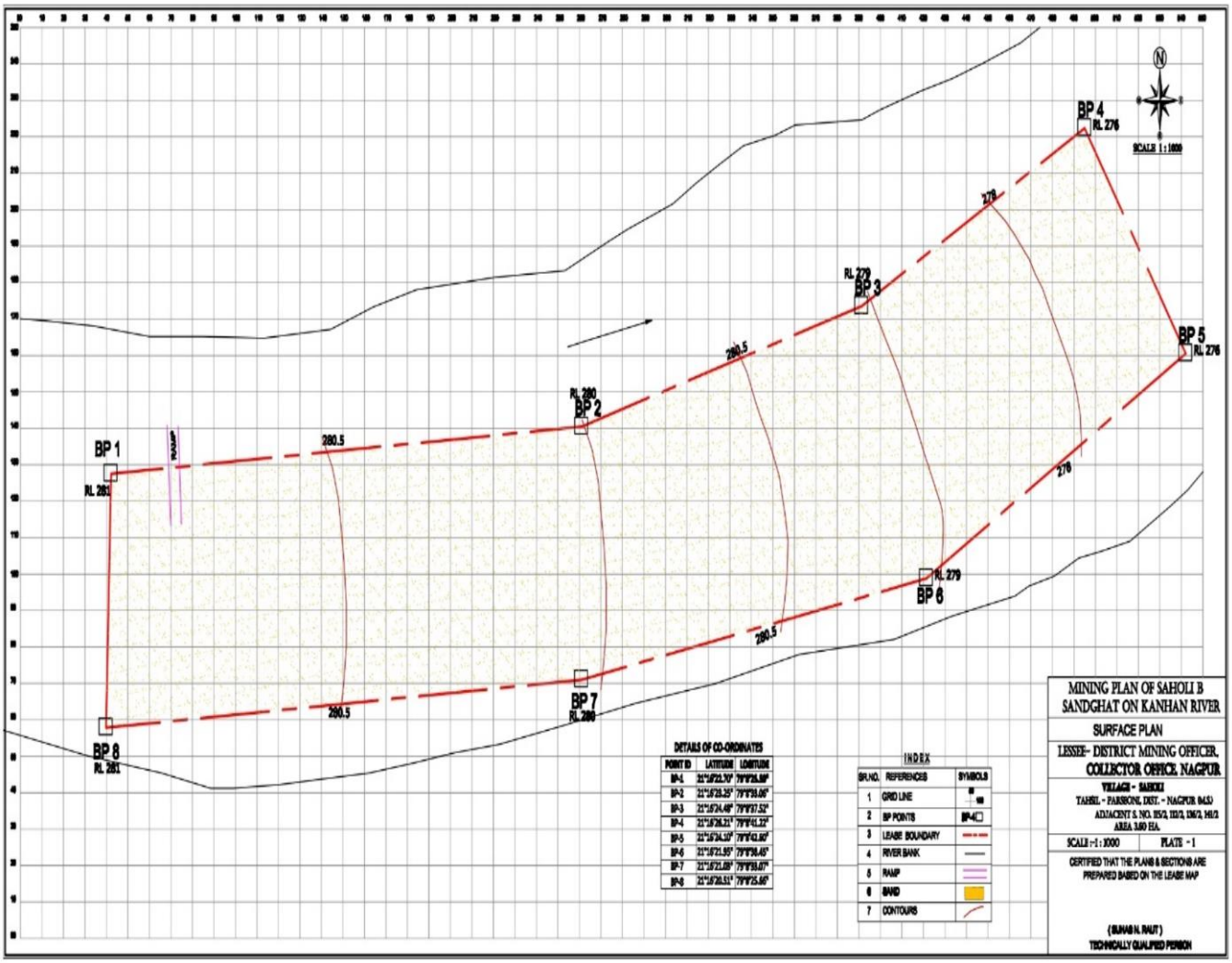
JUNI KAMPTEE SAND GHAT GRID MAP



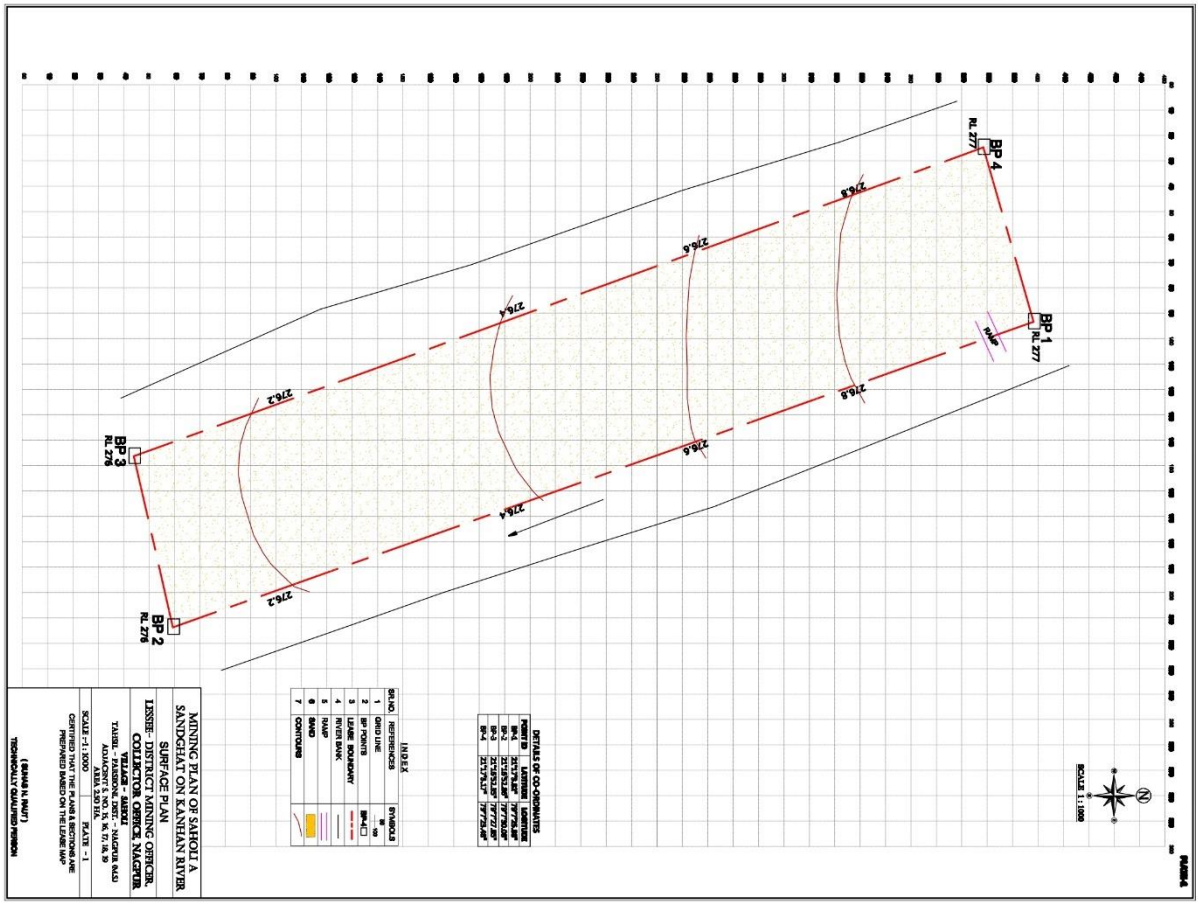
PARDI K SAND GHAT GRID MAP



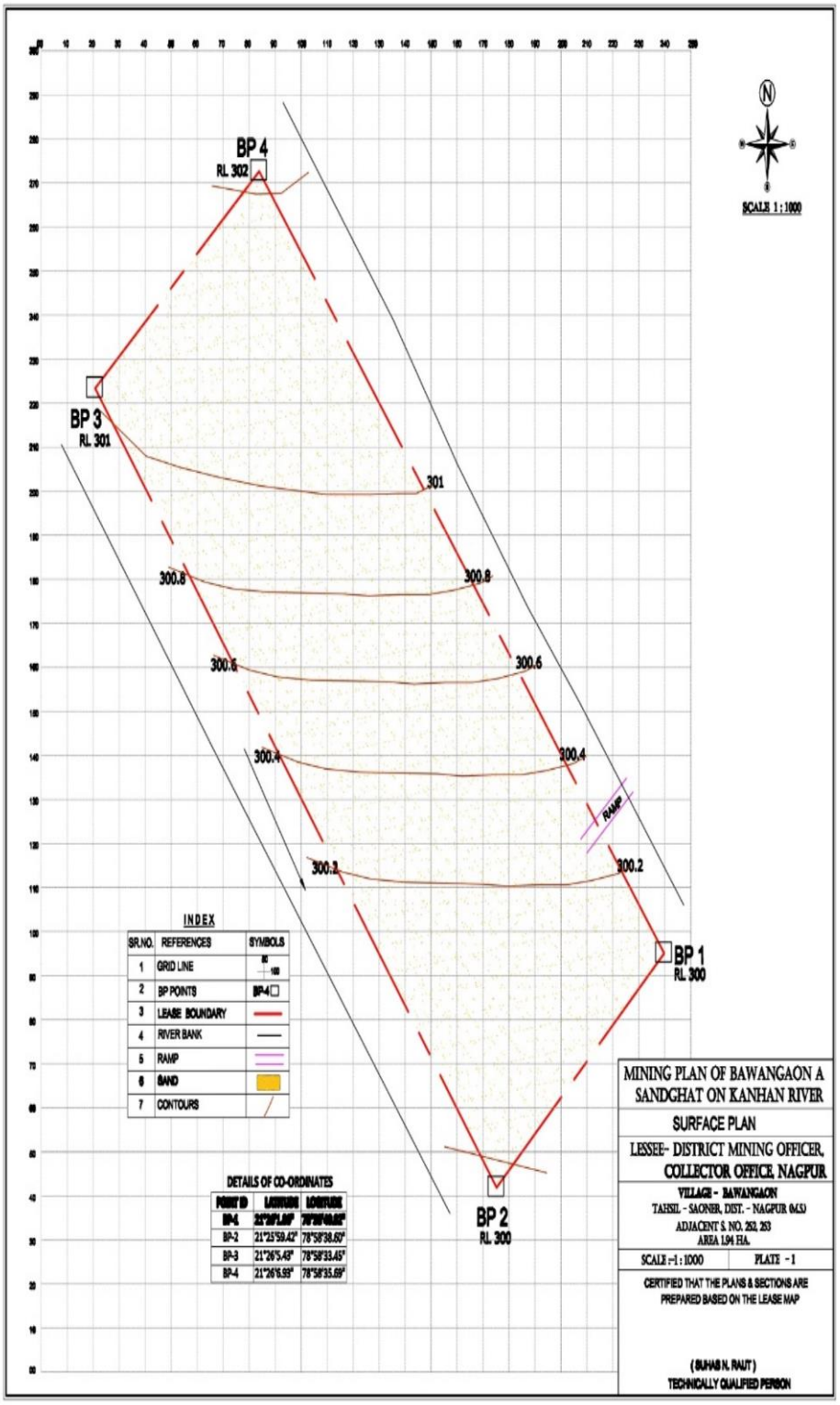
SAHOLI B SAND GHAT GRID MAP



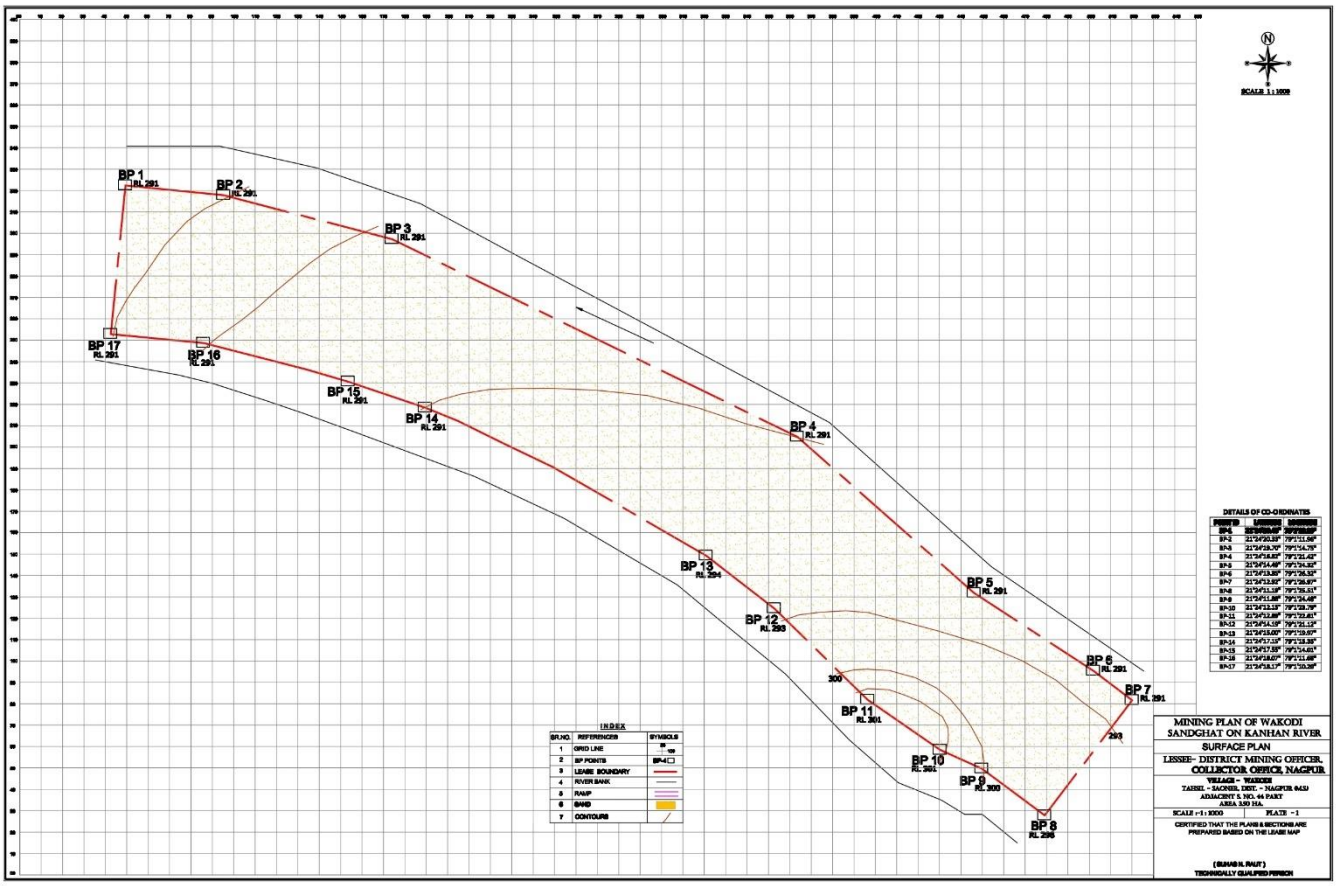
SAHOLI A SAND GHAT GRID MAP



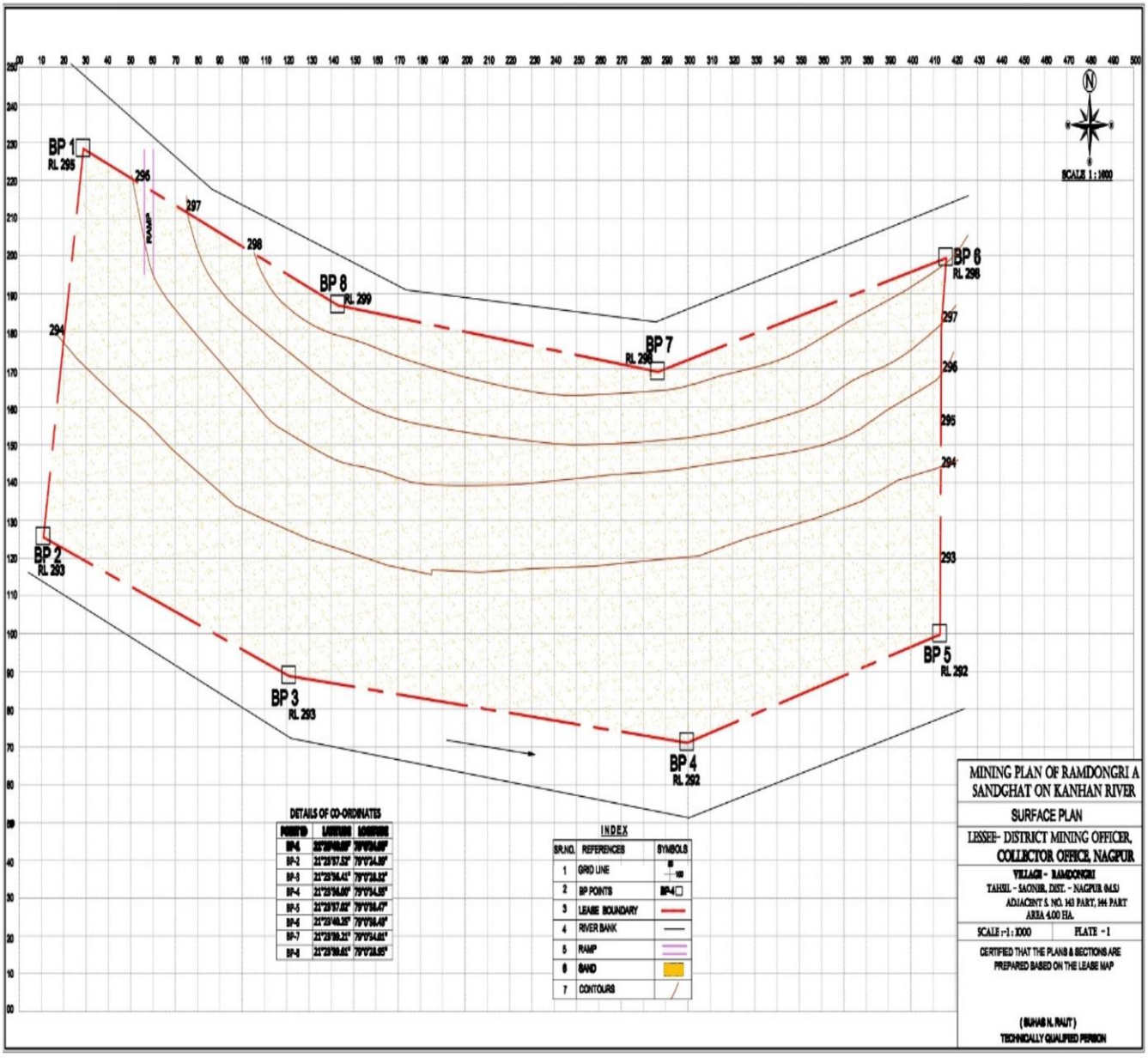
BAWANGAON A SAND GHAT GRID MAP



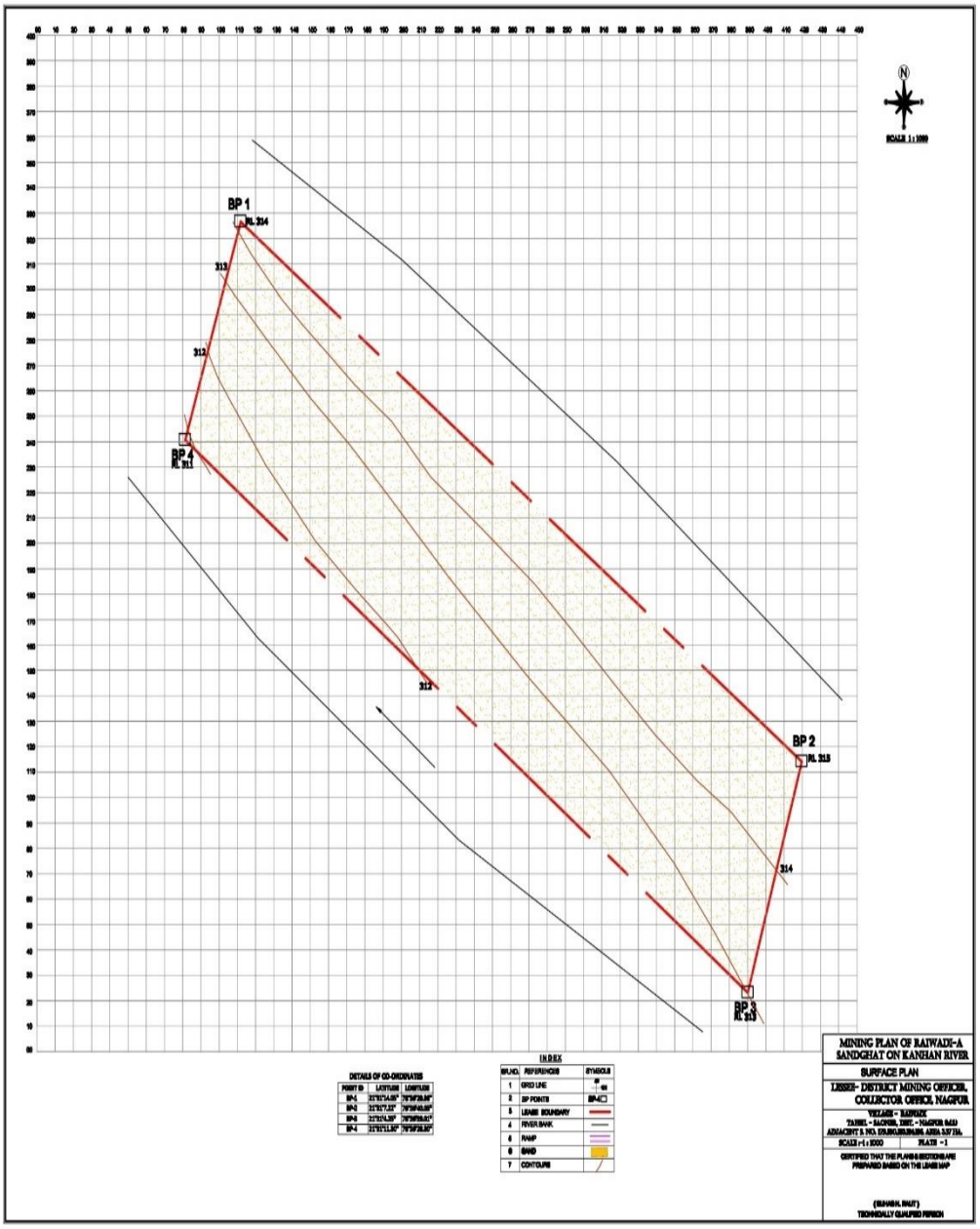
WAKODI SAND GHAT GRID MAP



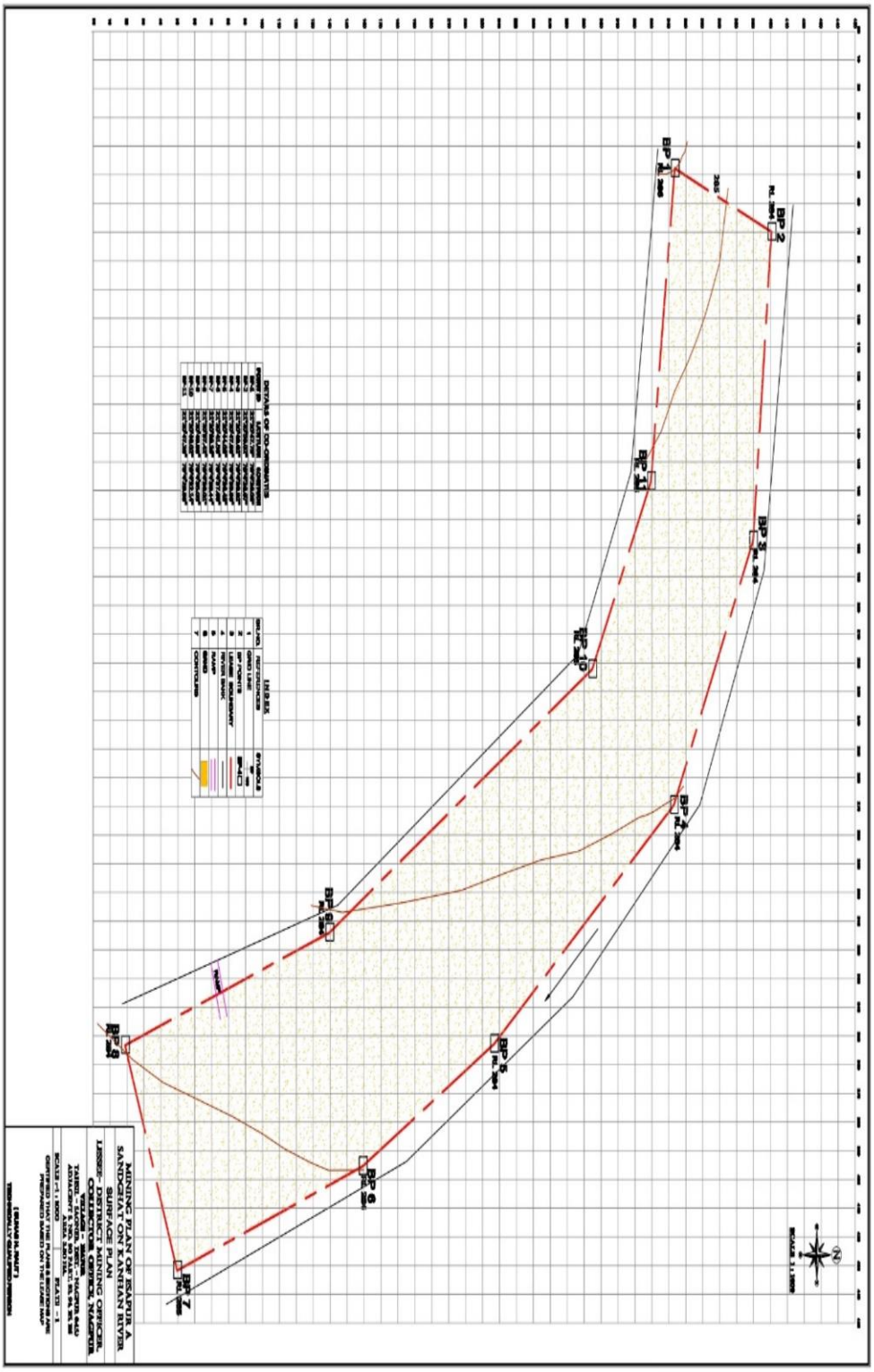
RAMDONGRI A SAND GHAT GRID MAP



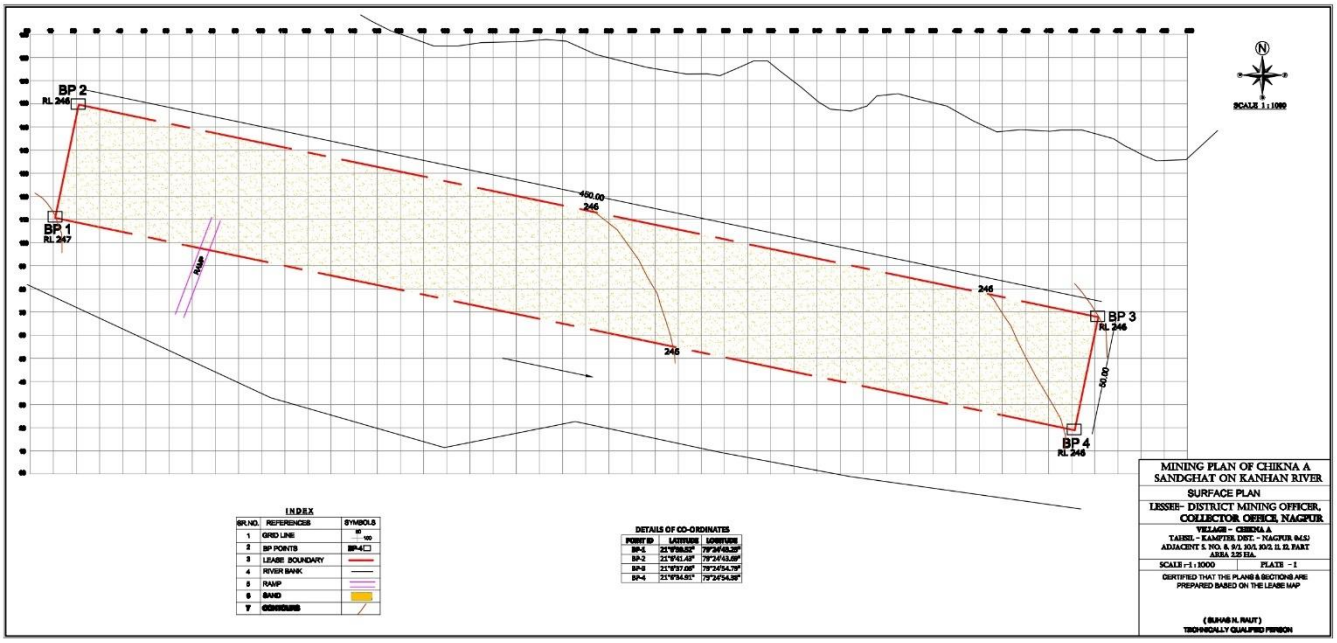
RAIWADI A SAND GHAT GRID MAP



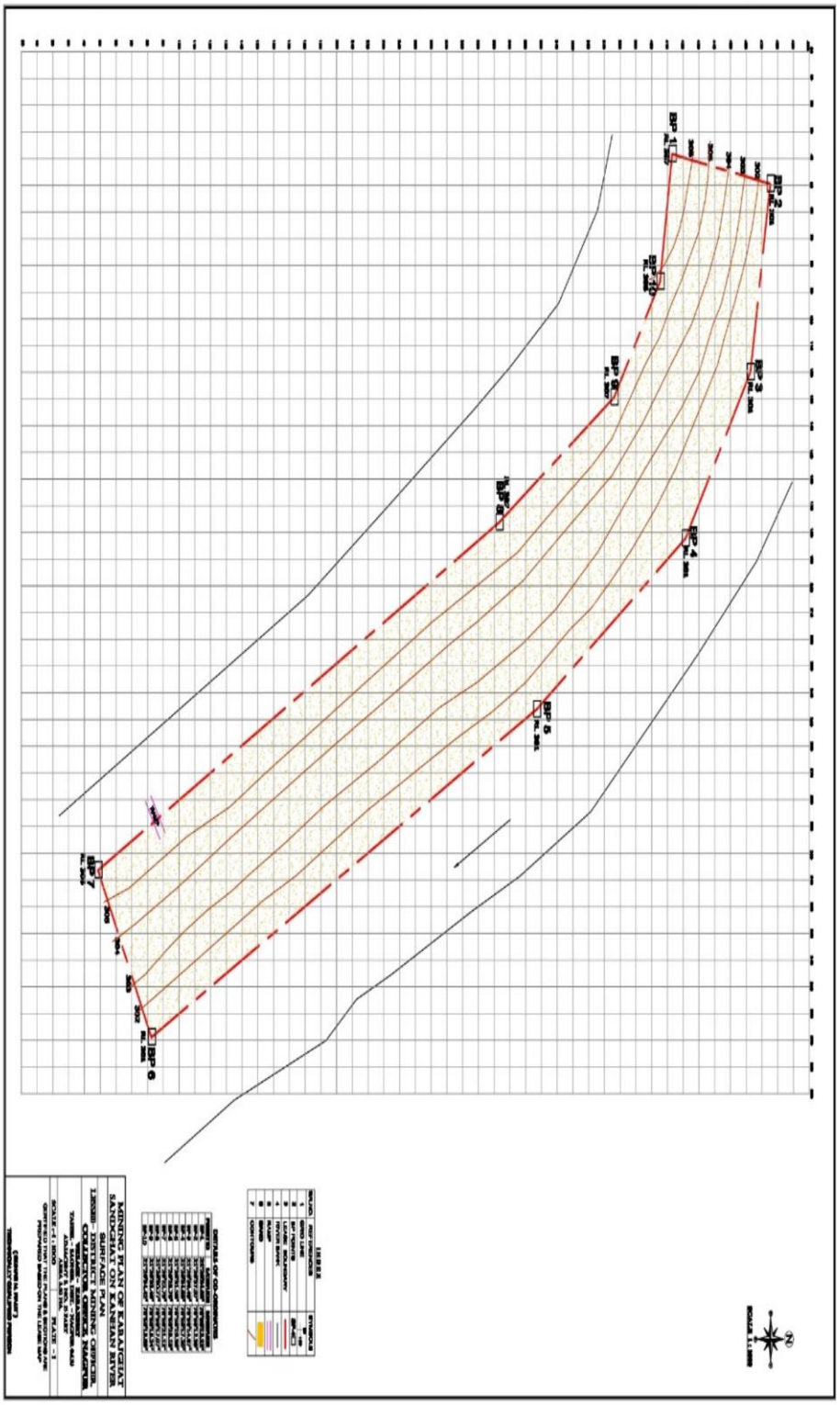
ESAPUR A SAND GHAT GRID MAP



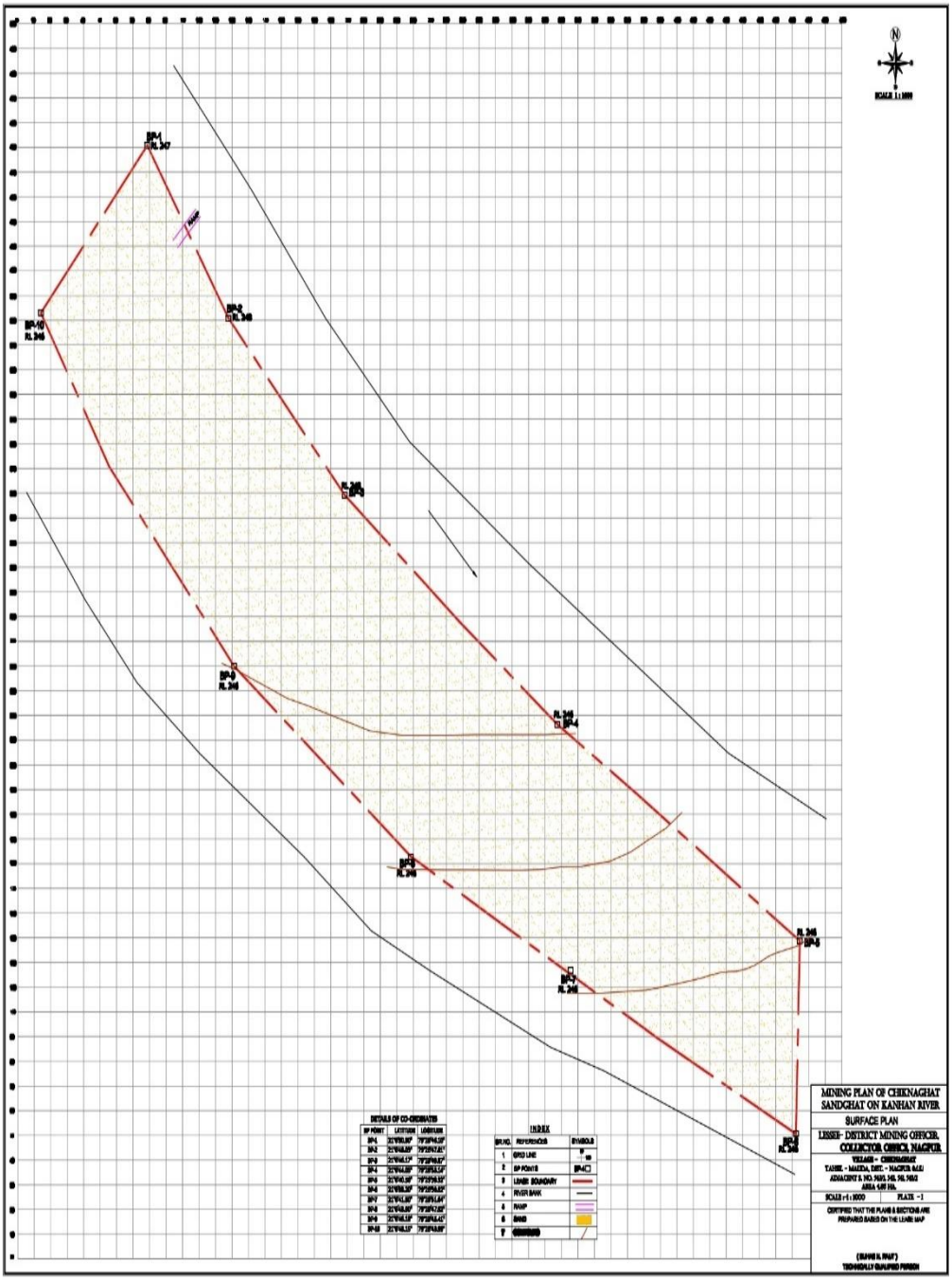
CHIKNA A SAND GHAT GRID MAP



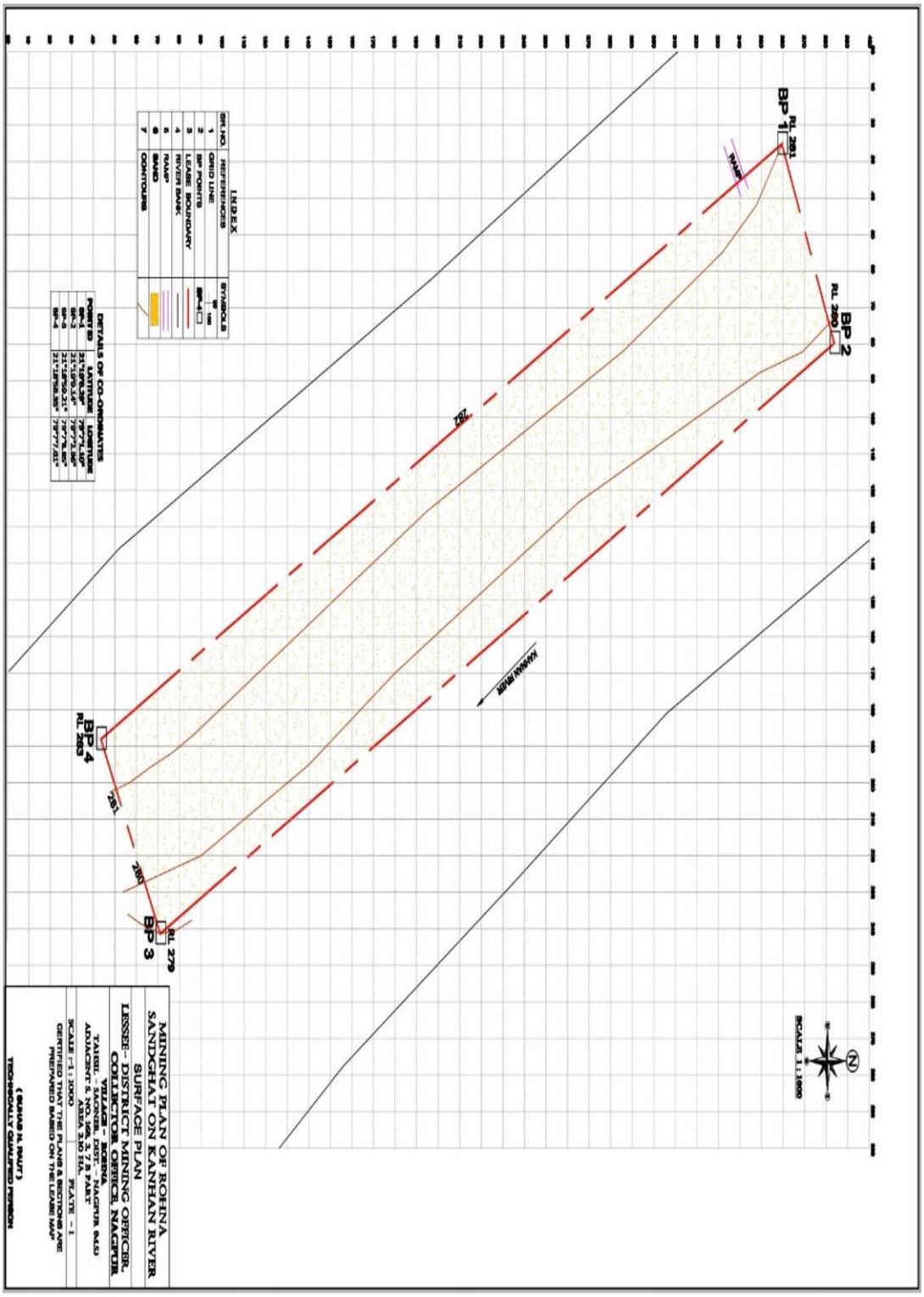
KARAJGHAT AND GHAT GRID MAP



CHIKNAGHAT SAND GHAT GRID MAP



ROHANA SAND GHAT GRID MAP



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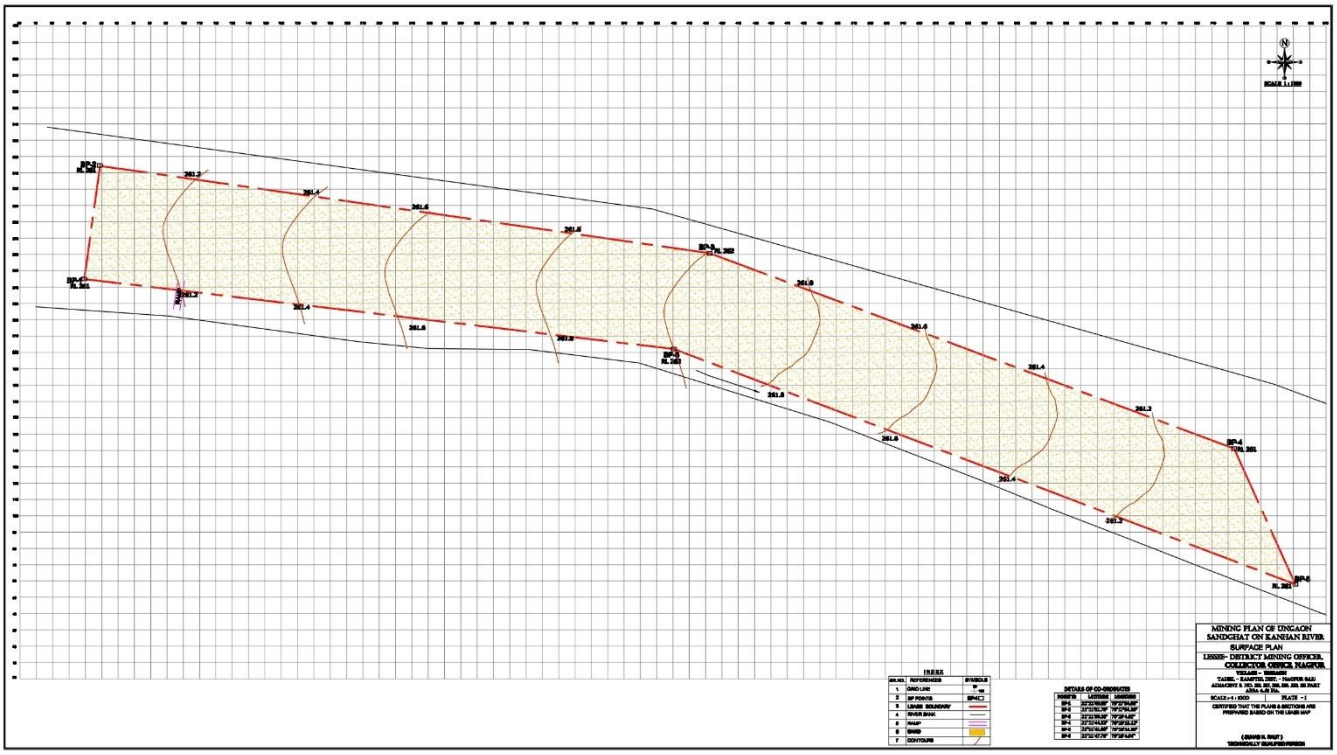

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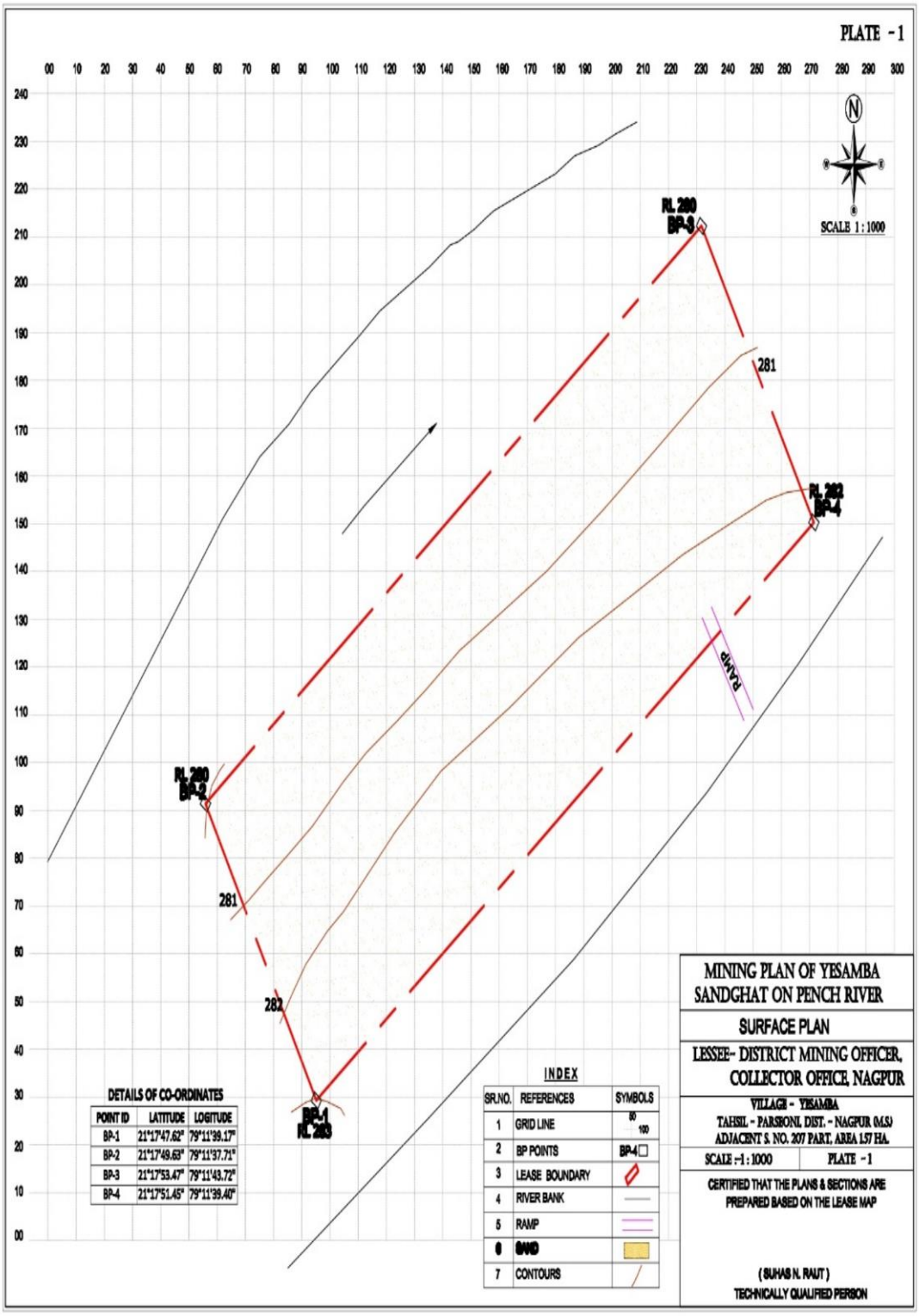

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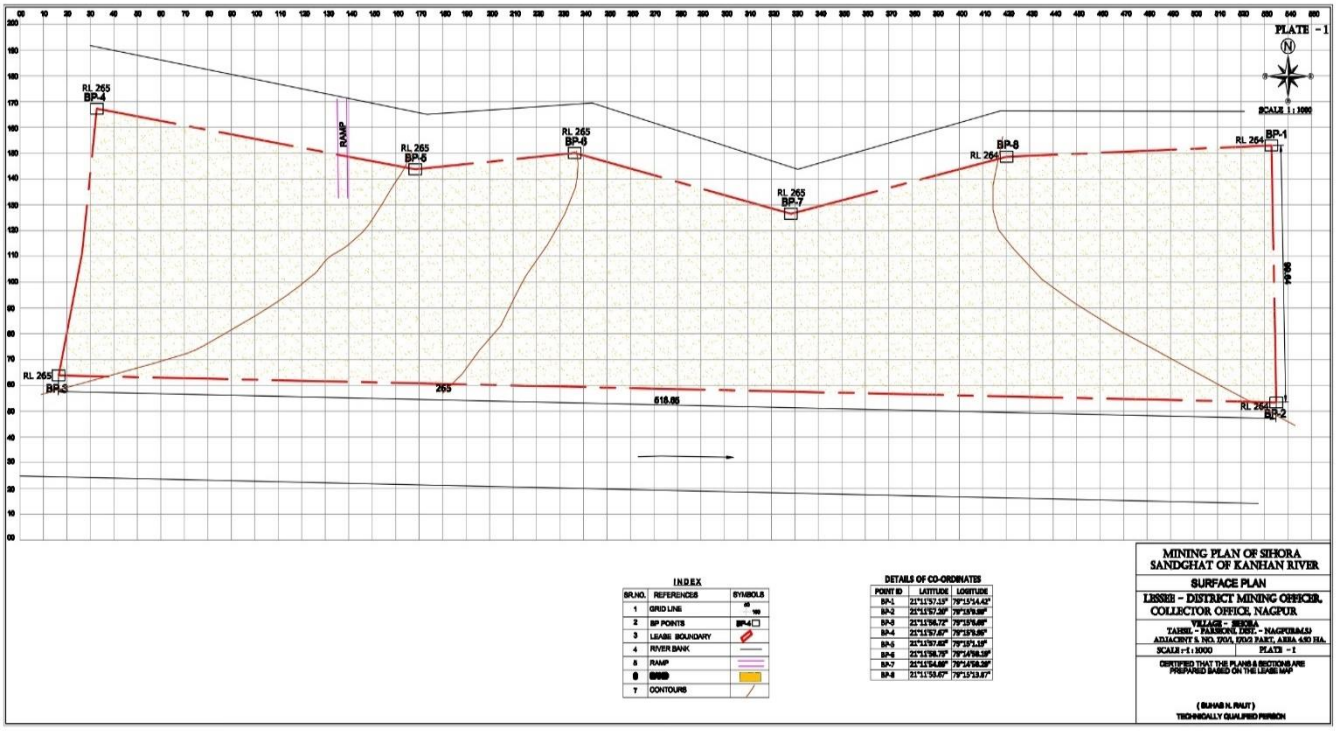

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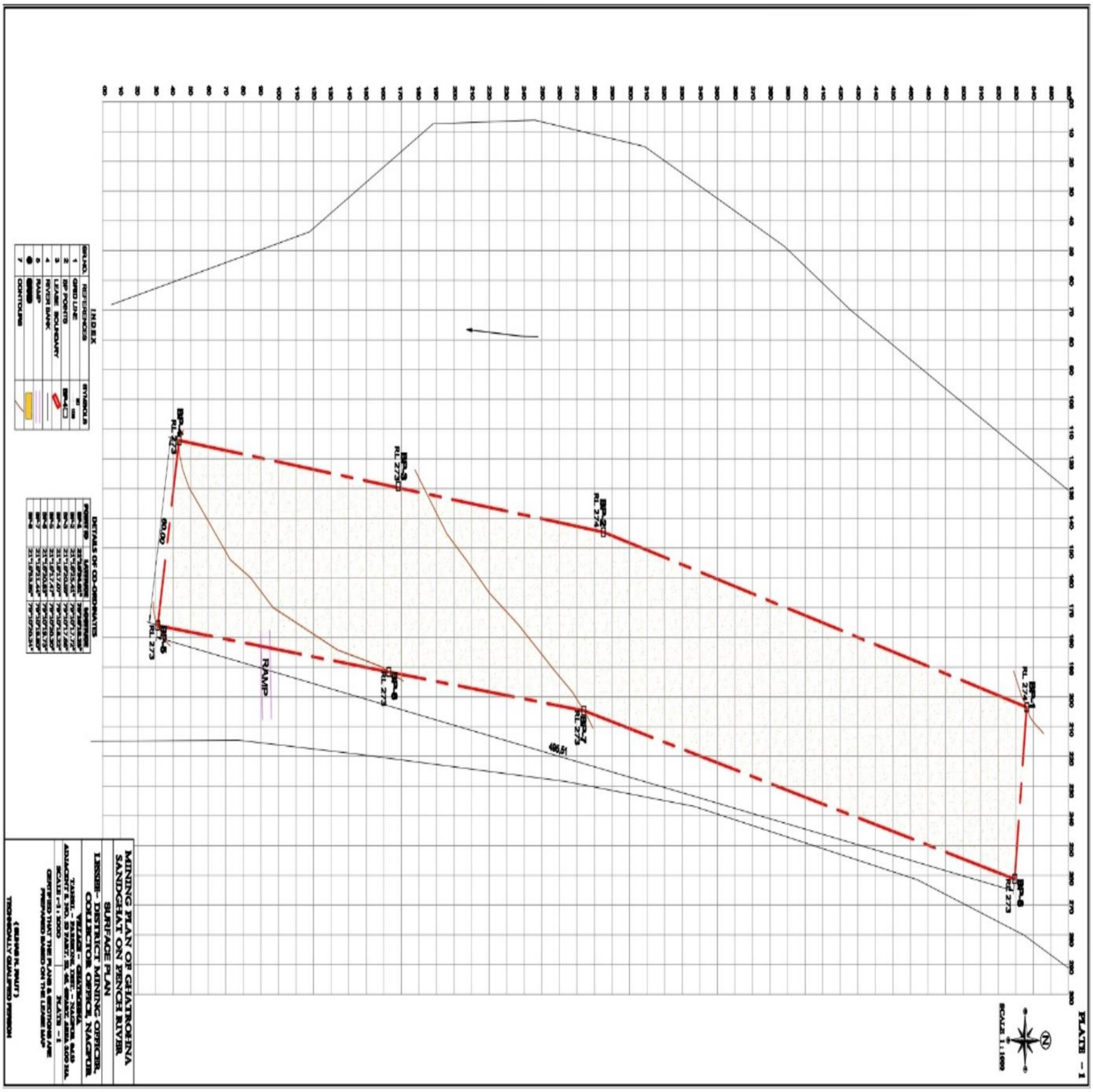

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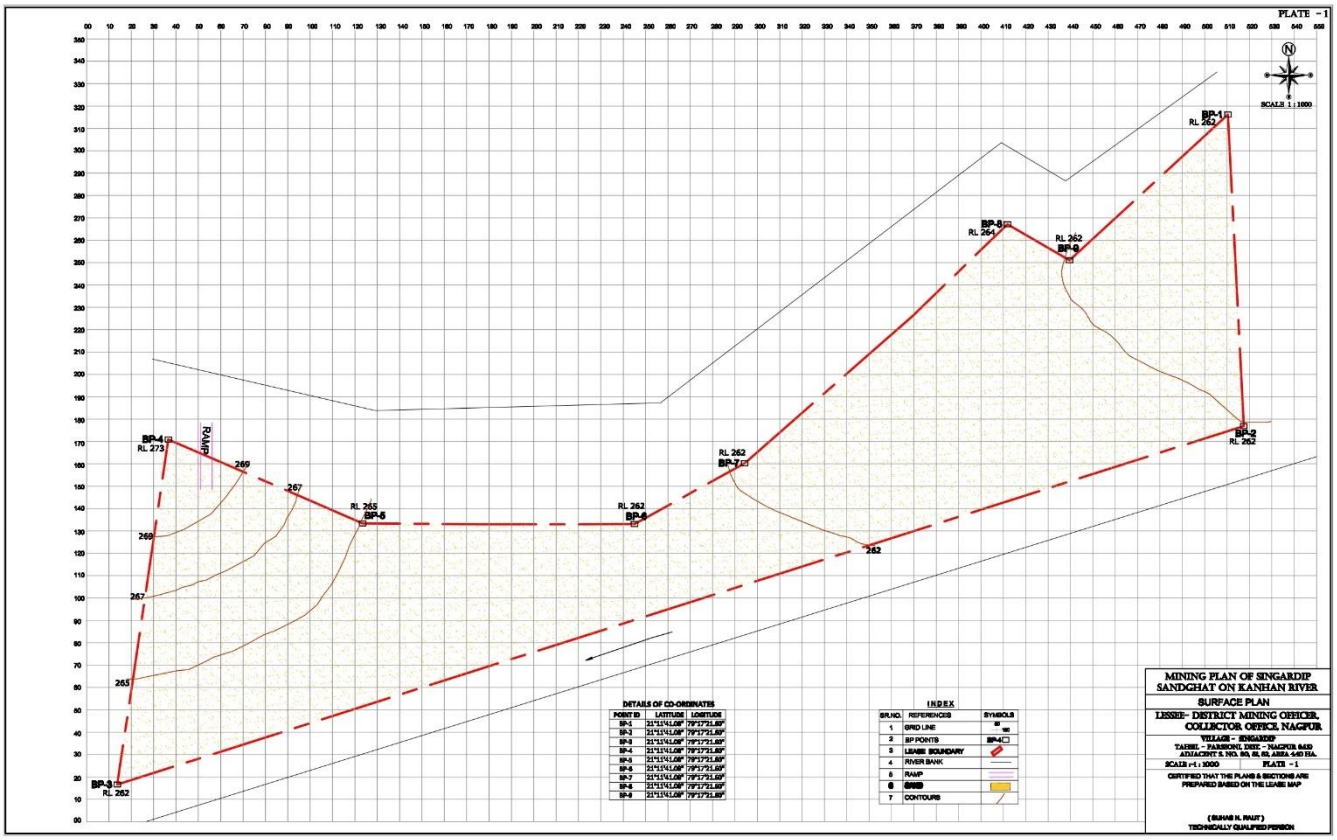

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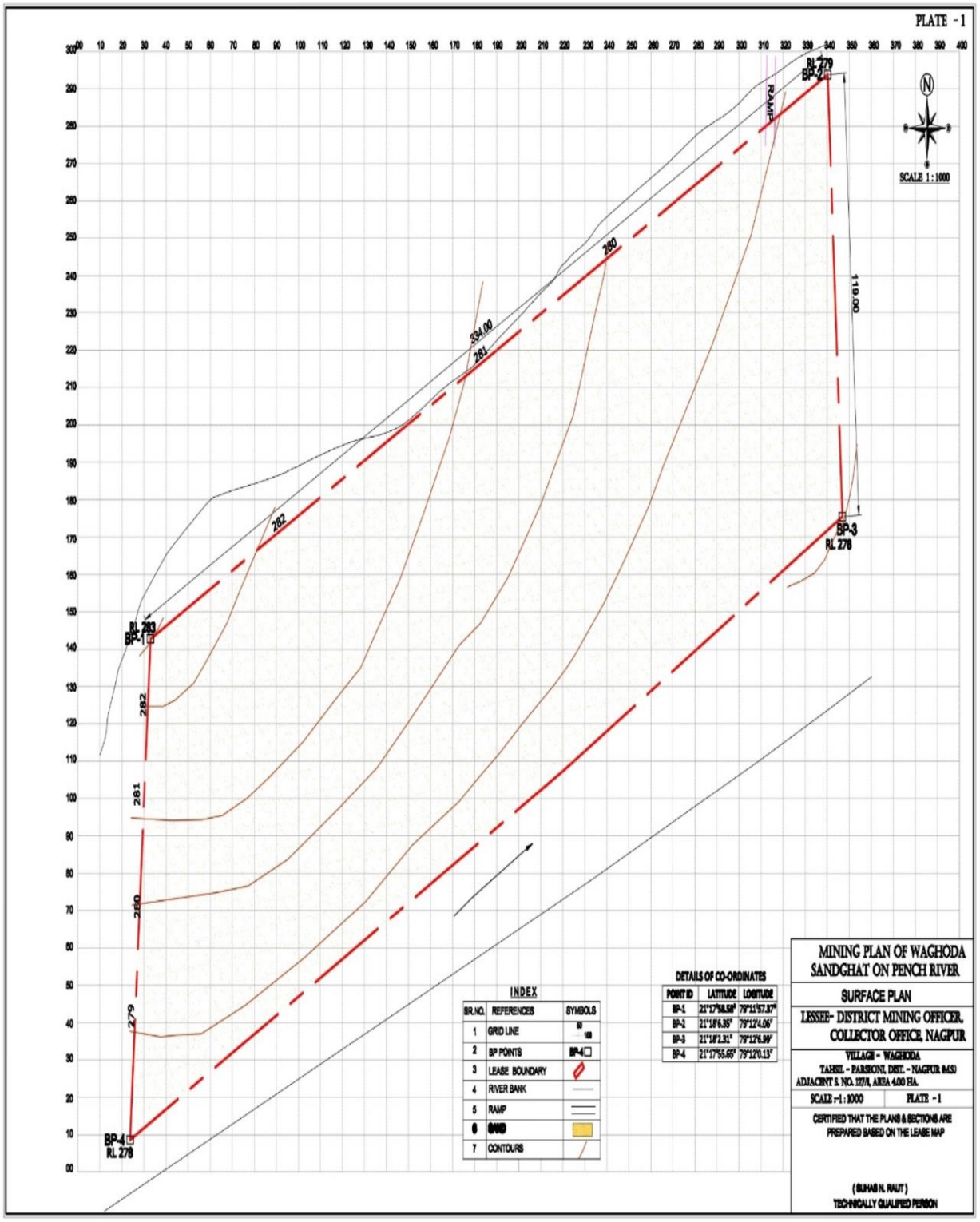

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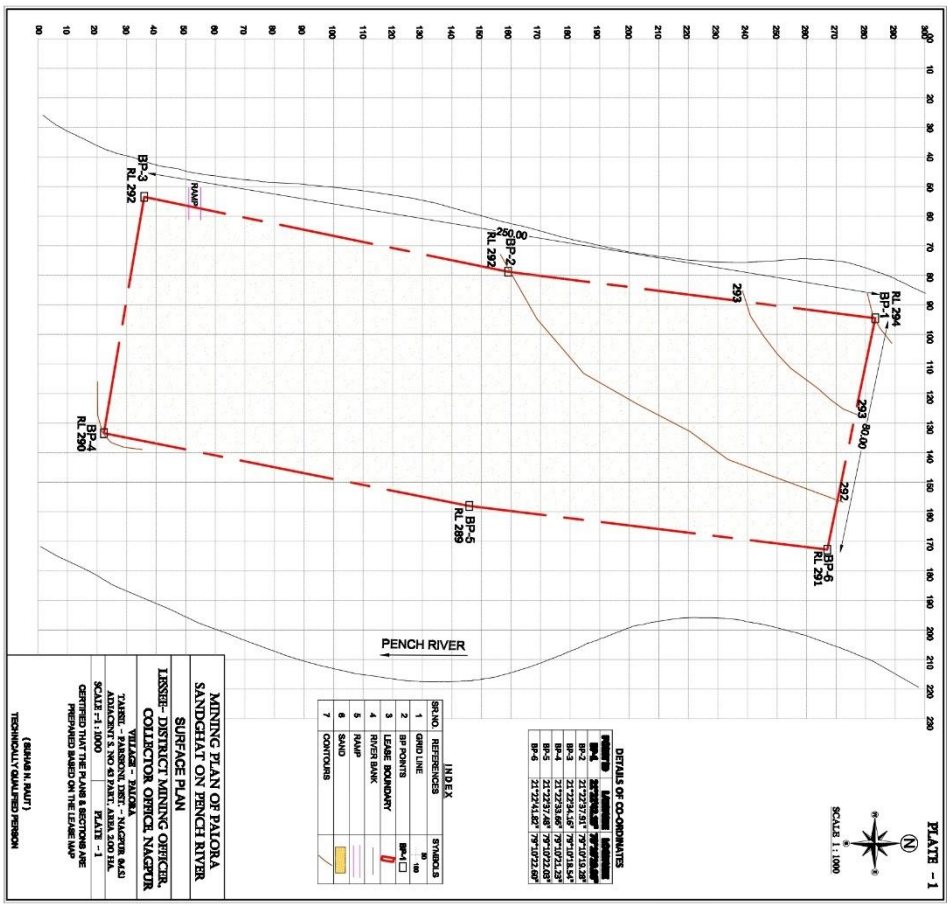

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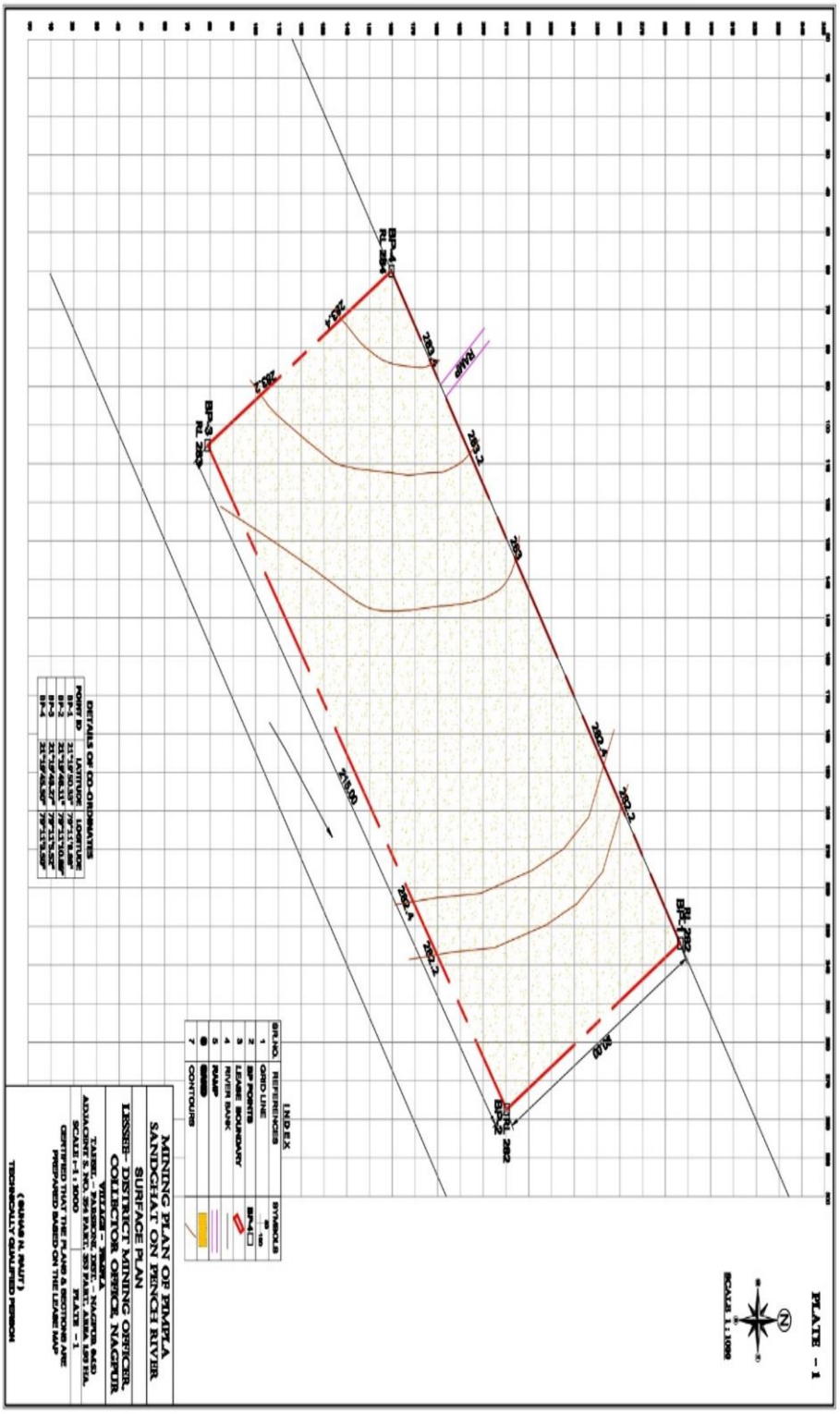

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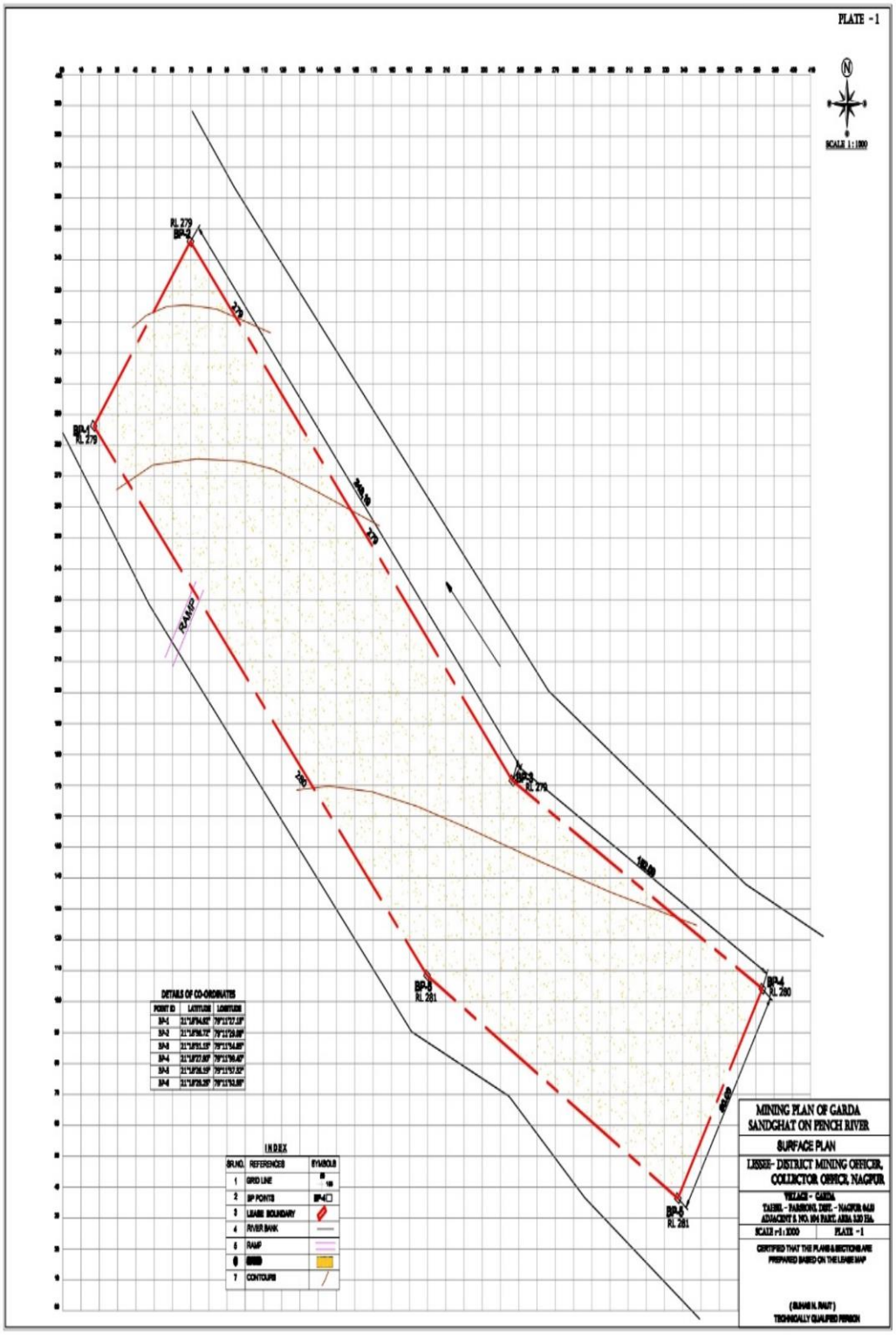

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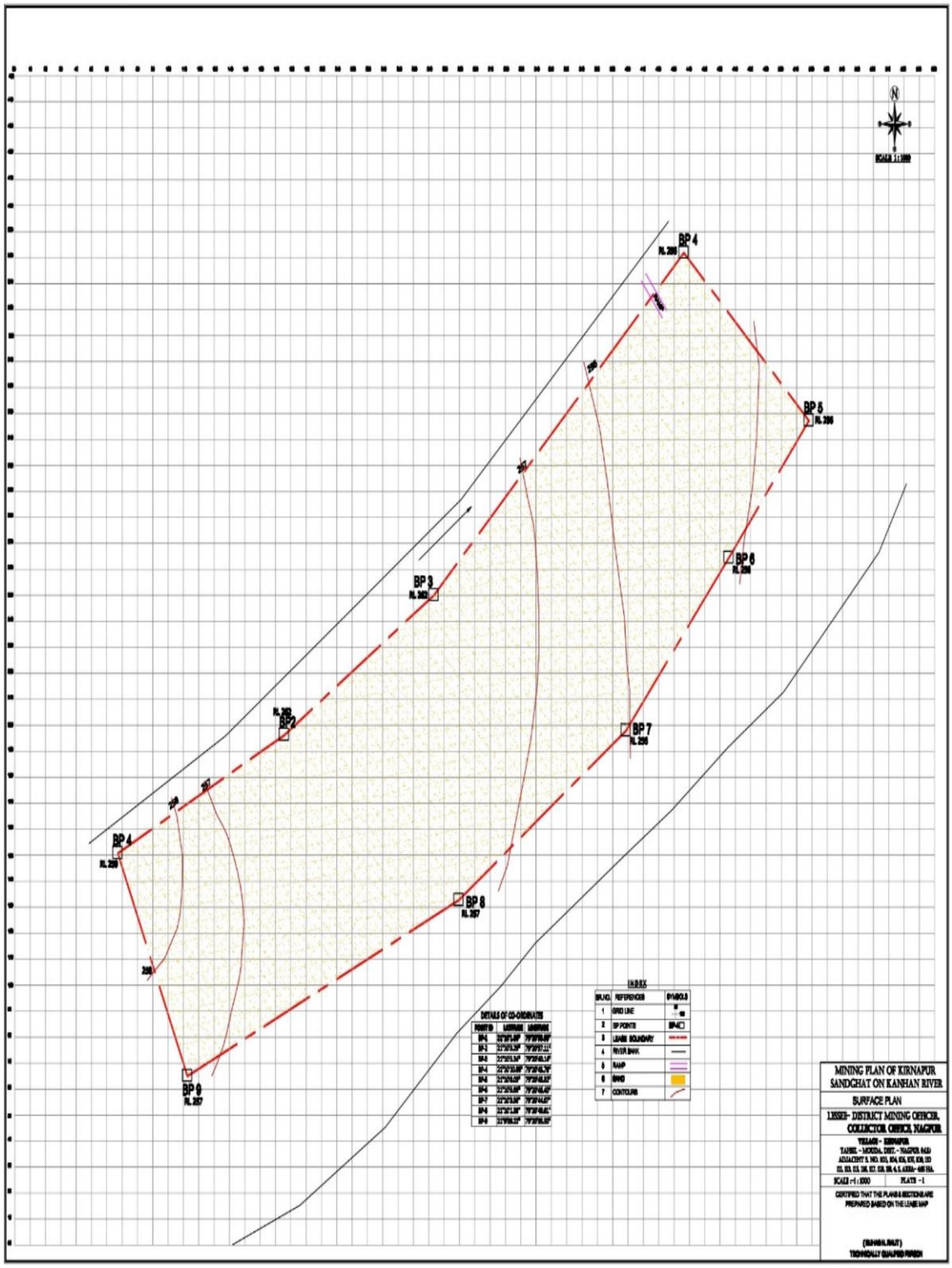

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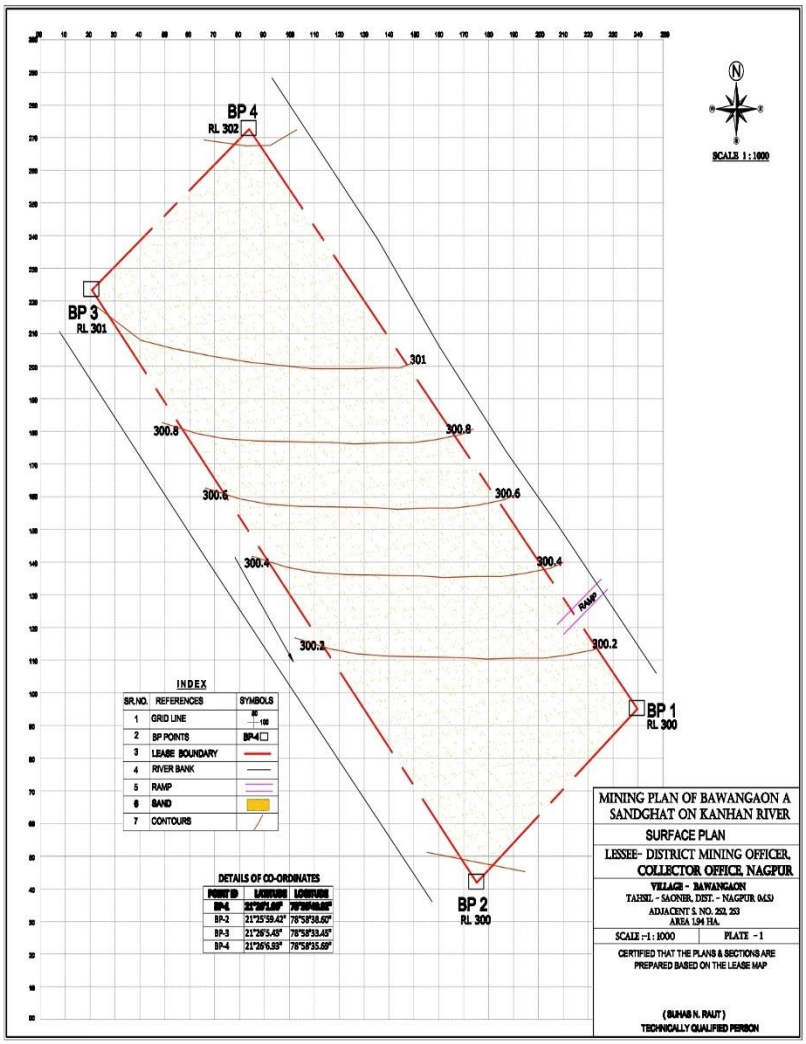

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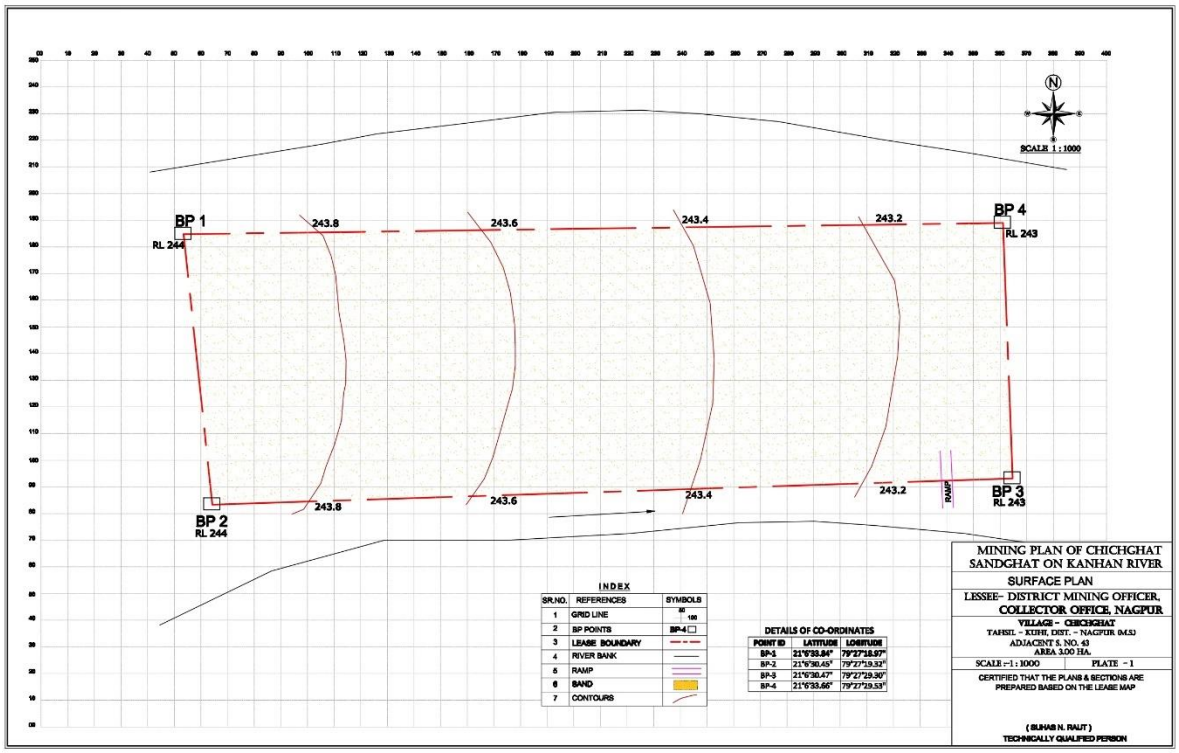


PART-B

FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

Prepared under:

a) Appendix-X of MoEF&CC, Gol Notification S.O. 141(E) dated 15.1.2016 b) MoEF&CC, Gol Notification S.O. 3611(E) dated 25.07.2018

CHAPTER 1
INTRODUCTION

Hon'ble Supreme Court of India dated 27th February, 2012 in LA. No.12-13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., prior environmental clearance has made mandatory for mining of minor minerals irrespective of the area of mining lease. Accordingly, Ministry of Environment Forest & Climate Change (MoEF& CC) had issued Office Memorandum No. LIIOII/47/2011-1A II(M) dated 18th May 2013. As per this O.M. all mining projects of minor minerals would henceforth require prior Environmental Clearance irrespective of the lease area. The stone quarry and sand quarrying projects need environmental clearance as per the MoEF guidelines and such pg. 47 projects are treated as Category 'B' even if the lease area is less than 5 Ha. Subsequently, various amendments were made as regards to obtain environmental clearance of the minor minerals.

The Hon'ble National Green Tribunal, vide its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals. As per the latest amendment S.O. 141 (E) & S.O.190(E) dated 15th January 2016 & 20th January in exercise of the powers conferred by sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) and in pursuance of notification of Ministry of Environment and Forest number S.O. 1533 (E), dated the 14th September, 2006 the Central Government had constituted the District Level Environment Impact Assessment Authority (DEIAA), for grant of Environmental Clearance. for Category B2[1] Projects for mining of minor minerals, for all the districts in the country. But later on Hon. NGT, vide its order dated 13th Sept 2018, stated that for 0-5 Ha areas also recommendation of grant EC by SEIAA instead of DEAC/DEIAA.

The MoEF&CC in its Notification dated 15th January 2016 has prescribed Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals. A detailed procedure and format for preparation of District Survey Report is provided in the said Notification. Further the procedure for preparation of DSR and format is amended vide MoEF&CC Notification S.O. 3611(E) dated 25.07.2018. The DSR is defined at "Appendix -X (See Paragraph 7(iii)(a)" of the notification S.O.141(E)dated 15.01.2016 and S.O. 3611(E) dated 25.07.2018.

CHAPTER 2
OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is very rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay. Copper Ore, Chromites, Tungsten Ore, Zinc Ore, Granites etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee. Apart from this the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saciner and Parshivani tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district.

Sr.No	Mineral	No of Mines
1	Manganese Ore	37
2	Coal	15
3	Dolomite	07
4	White Clay	02
5	Quartz	02
6	Sand (Stowing)	04
7	Stone Quarries (leases)	132

Table 2: Mineral production in Nagpur district

As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 2016-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 2017-18.

The quantity of minor mineral consumption is a thermometer to assess the rate of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly

met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope.

CHAPTER 3
GENERAL PROFILE OF THE DISTRICT

3.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India.

Table 3.1: Brief Description of Nagpur District

Sr. No	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

3.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

3.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: https://mahaforest.gov.in

3.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23.911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932 Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07% 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68,30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: https://nagpur.gov.in/demography)

3.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city.

An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneshwar, Thiruvananthapuram, Cochin, Gorakhpur. Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region.(Source: https:/www.nmcnagpur gov.in/location-and-connectivity)

CHAPTER 4
GEOLOGY AND MINERAL WEALTH

Regional Geologyof the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocean in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocean period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystallineseries.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern ‘Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern' Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calcyphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganiferous rocks known as Gondite. Gondite (named after the aboriginal tribe ‘Gonds’ found in these areas) is a rock composed of quartz and manganese Garnet ‘spessar-tite’. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *SitapariteChiklite, Winchite, Juddite, Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiegneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of theSausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks.

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be al zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50º-80º) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three ‘Nappe’ units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southernly dip. ‘Nappe’ is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting ‘cross-fold’ structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20°to30° towards East.

Gondwana Super group:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced

by faults, which in many cases form he boundary of Gondwanas with older rocks and therefore known as ‘Boundary fault’. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) byKamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaeanrocks.

Barakars:

Coal-hearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakaroutcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath thealluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch uptoBhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 kill. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4wide).

Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards

south- south-west and their estimated thickness is about 1,500 km. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceoussandstone. Fossil flora include species of *Phyllotheca, Vertebraria, Pecopteris, Gangamopteris, Angiopteridium, Macrotaeniopteris, Noeggera- thiopsis and Glossopteris.* The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania, Paludina and Corbicula andPhysa.*

Deccan basalts (Traps) and Intertrappeans:

The western part of the district is covered by layers or doleritic and basaltic lavas, commonly known as ‘traps’ because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite,, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to ‘Plateau basalt’ type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These

rocks are generally dark grey in colour having a specific gravity of 2.9.

Geological Sucssesion of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows(Traps)with AssociatedIntertrappeansediments	Lower Eocene to upper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthistage Barakar stage Talchir stage	Permian Corboniferous
Streaky GranitiegneissesSausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

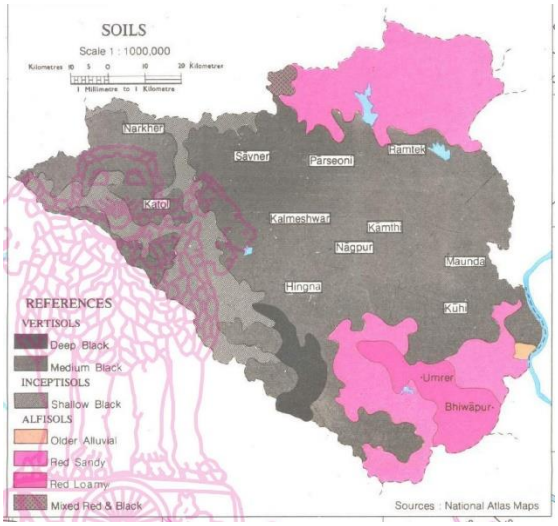


Fig: Type of Soil in Nagpur District

CHAPTER 5
DRAINAGE AND IRRIGATION PATTERN

5.1 Basin/Sub basin

The district falls in the Godavari Basin which is further divided Kanhan sub basin and Pench Sub basin which is drained in the south. Important Rivers of the district are kanhan, Pench, Nag, Kolar, Sur and Wardha

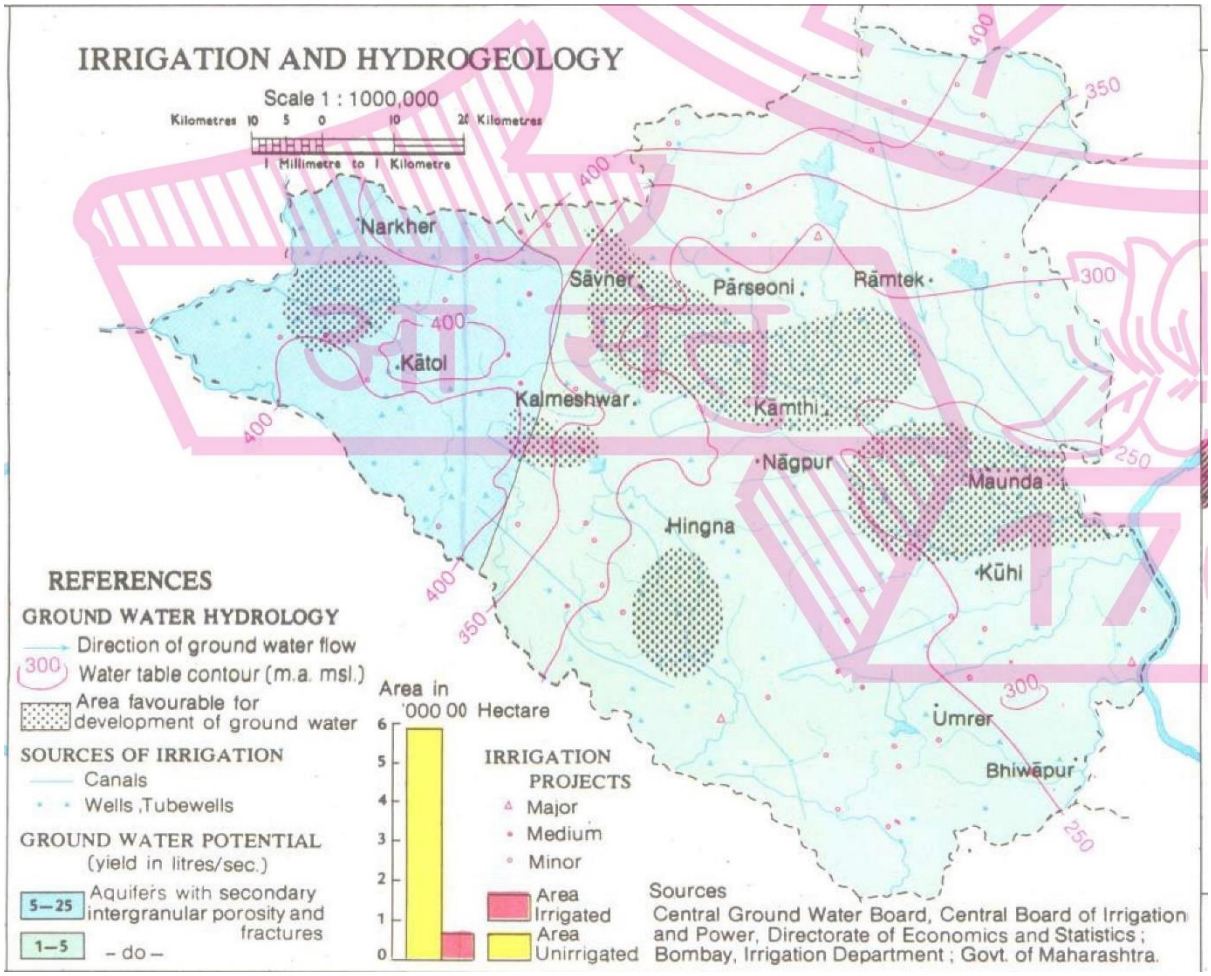


Fig: Irrigation and Hydrogeolocal Map of Nagpur District

5.2 Irrigation pattern:

Table 5.1: Irrigation pattern of the District

Irrigation	**Area(*000 ha)**		
Not irrigated area	134		
Gross irrigated area	228.9		
Rainfed Area	499		
Sources of Irrigation	Number	**Area(*000 ha)**	Percentage of total irrigated area
Canals		86.92	63.5
Tanks	216		2.6

Open wells	55277	56.16	27.1
Bore wells	5661	-	
Lift Irrigation schemes	3	-	
Micro Irrigation		-	
Drip	3433(Sets)	3.1	
Sprinkler	5353(Sets)	4.8	
Other sources (Please specify)	730	7.9	6.6
Total Irrigated Area			
Pump Sets	39189		
No. of Tractors	9951		

Source: Agriculture contingency plan of Nagpur

CHAPTER 6
LAND UTILIZATION PATTERN IN THE DISTRICT

Land Use pattern

The total area of the district is 986 thousands hectares of which forest cover 155 thousands hectares and area under cultivation or 643thousands hectares. The land utilization pattern of the district is given in Table 6.1

Table 6. Land utilization

Sr. No.	Description	Area (Area in HaR)
1	Forest	1541
2	Barren & uncultivated	338
3	Land under non-agriculture	994
4	Cultivable waste land	345
5	Permanent Pasture	551
6	Misc. trees & groves	78
7	Current Fallow	208
8	Other fallow	217
9	Net area Shown	5592
10	Area shown more than once	1030
11	Gross cropped area	6622
12	Gro graphical area	9864
13	Cropping intensity	118
14	Cultivable area	6440

(Source: hppt:/krishi.maharashtra.gov.in/1074/Land-Utilization-Statistics)

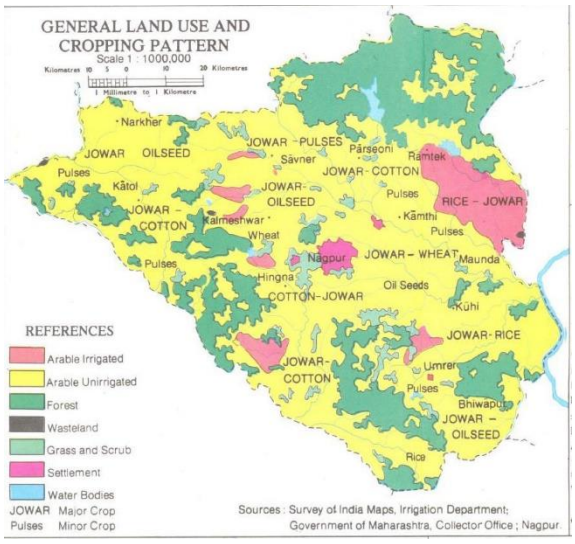


Fig: Land Use Map of Nagpur District

CHAPTER 7
SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT

7.1 GROUND WATER SCENARIO

Nagpur District is a part of the Wainganga alluvial plains and is underlain by quaternary alluvium comprising mainly sands of various grades with clay and kankar. The central alluvial plains extends from north to south are made up of finer clastics comprising mainly clay, silt, sandy clay with Kankar and subordinate sands.

7.2 HYDROGEOLOGY

The ground water in the areaoccurs both under confined and water table condition. It occurs in the zone of saturation within the granular zones encountered below the land surface. The principal source of replenishment to the ground water body is precipitation. The north-eastern and east central parts of the district are drained by the Wanginga andits tributaries. The central and western portion is drained by the Wene which is tributary of WardhaRiver. The aquifermaterialis comprised of fine to medium sand and coarse coarse sand with gravel.

The important water bearing formations of Nagpur districtare discussed below. A map depicting the hydrogeological features is shown in figure below.

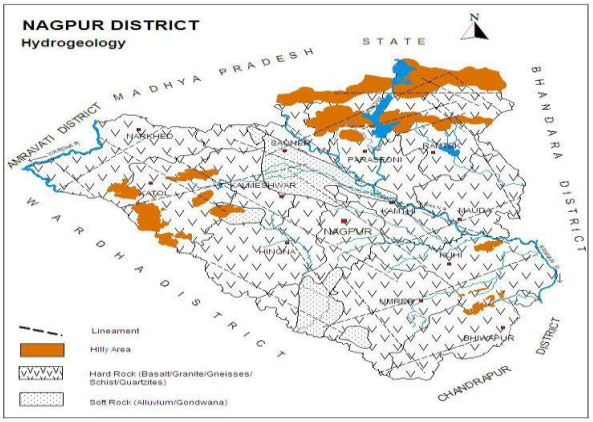


Fig: Hydrogeological Map of District

Water Level Scenario

Central ground water board periodically monitors the National Hydrograph network Stations (NHNS) Stations In Nagpur district, four times a year i.e., January May (Pre-monsoon) , August and November (Post-monsoon). The data on pre and post monsoon water level along with fluctuation during 2019.

Depth to Water Level-Pre-monsoon

The depth to water level in the district during May 2021 ranges between 0.05 (umrer) and 15.59 (Sathnaovi) mbgl. Depth to water levels during pre-monsoon (May 2019) has been depicted in Fig 7.2. Shallow water level within 10 m bgl are seen in almost entire district.

Water levels in the range of 10-20 m bgl are observed parts of Kamleshwar, Hingna, Narkhed, Paraseoni, talukas, as isolated patches.

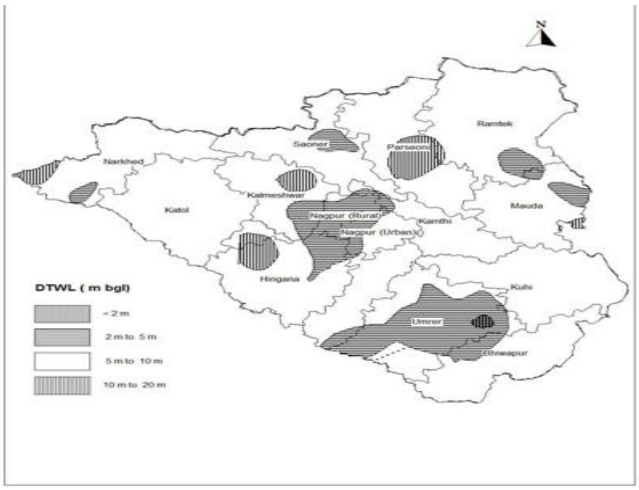


Fig 7.2: Depth to Water Level (Pre-monsoon-May)

Depth of water level-Post-monsoon

The depth to water levels during Nov. 2021 ranges between 0.60 m bel (Umrer) and 10.60 m (Manegaontek)Spatial variation in post-monsoon depth to waterlevels is shown in Fig 7.3. in the district the water levels are shallow within 10 m bgl Water levels of 2-5 m bgl is the most dominant range occupying major part of Ramtek, Mouda, Kuhi and Bhivapur talukas. Water level of less than 2 m bgl are observed in isolated patched i.e.part of Narkhed, Nagpur, Umrer and Mouda talukas.

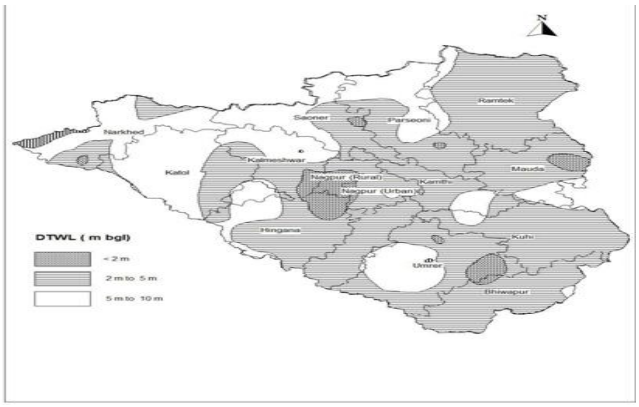


Fig. 7.3: Depth to Water Level (Post-monsoon-Nov. 2021)

Ground Water Resources

Central Ground Wates Board and Groundwater Survey and Development Agency (GSDA) have jointly estimated the ground water resorces of Nagpur district based on GEC-97 methodology. Taluka wise ground water resources are shown in Fig. 7.4. As per the estimation the net annual ground water availability comes to be 1058.12 MCM The total gross draft for all uses is estimated at 407.80 MCM with irrigation sector being the major consumer having a draft of 343.59 MCM The allocation for domestic and industrial water requirements are worked at 126.80 MCM. The net ground water availability for future irrigation is estimated at 588.05

MCM. Stage of ground water development varies from 12.0% (Mouda) to 75% (Narkhed). The overall stage of ground water development for the district is 38.54% All the talukas have been categorised as "Safe".

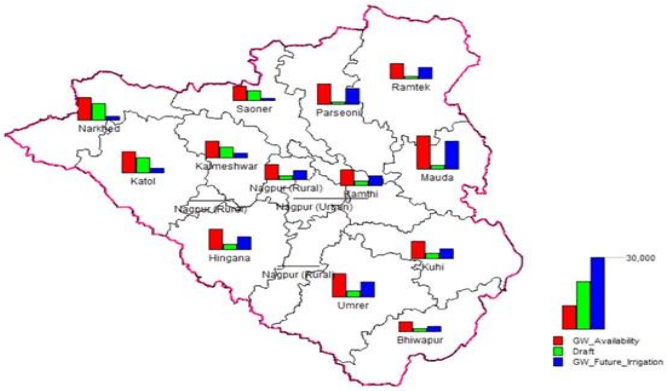


Fig: Ground Water Resources of the District

Ground Water Management Strategy

Ground water has special significance for agricultural development in the State of Maharashtra. The ground water development in some parts of the State has reached a critical stage resulting in decline of ground water levels. There is thus a need to adopt an integrated approach of development of ground water

Ground Water Development

The basalt is the main formation of the district and occupies an area of about 4300 sq. km. It is observed that the vesicular and weathered basalts are more productive than the massive and jointed basalts. Though the Archaeans are highly weathered, they form moderate potential aquifers. Alluvium is the most potential aquifer occurring in the district. In general, the Gondwana formation gives moderate to high yield while the Lameta is poor yielding aquifer in the district. Dug wells are most common ground water extraction structure in the district and are used for both domestic and irrigation purposes. The formation wise yield of dug wells is given in Table below.

Table No. 7.1: Formation-wise yield of Dugwells.

Sr. No	Rock Formation	Depth range (m bgl)	Yeild range (m^3 /day		Remarks
			Winter	Summer	
1	Archaen	4.97-26.00	20-300	5-120	Weathered and
					fractured formation from
					good aquifers
2	Gondwana	8.00-19.65	40-200	20-80	Kamathi is the best aquifer
3	Lameta	5.85-17.15	-	-	Poor aquifer and cannot
					Sustain pumping
4	Deccan Trap				
a	Massive	5.1-13.00	20-90	10-20	Poor aquifer
	Basalt				Limited pumping
b	Vesicular	5.7-13-15	20-288	20.240	During Summer yield is

	Basalt				Mostly between 20-60
					M^3/day
c	Weathered	4.00-17.25	30-384	10-128	Summer yield is
	Basalt				between 20 to 80
					M^3/day
d	Jointed	5.20-11.75	35-240	6-190	Summer yield is around
	Basalt				40 M^3/day
5	Alluvium	8.10-16.30	110-300	40-300	Restricted along the
					Rivers and their
					tributaries

(*Source: CGWB, Groundwater broacher of Nagpur District*

CHAPTERS 8
RAINFALL OF THE DISTRICT AND CLIMATIC CONDITION

Climatic Condition:

The Nagpur lies on 150-600 above sea level. Nagpur has tropical savannah climate with dry condition prevailing for most of the year. In winter there is much less rainfall than in summer. The Koppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month.Winter lasts from November to January, during which temperatures drop below 10 ^{o}C (50 ^{o}F)The highest recorded temperature in the city was 47.9 ^{o}Con 29 May,2013, while the lowest was 3.5 ^{o}C on December 2021.

Rainfall of the District

Table 8.1:Rainfall of the District

Month	Normal Rain	Actual Rain	Rain Days
January	12.7	0.29	0
February	12.1	8.98	2
March	14.5	17.0	3
April	7.2	2.94	0
May	11.5	40.40	4
June	166.3	260.38	18
July	304.4	309.61	19
August	281.3	165.20	12
September	168.4	345.26	26
October	53.6	337.78	5
November	15.8	5.46	1
December	12.5	16.92	1
Total	1060.3	1146.28	91

Source: maharain.maharashta.gov.in

Chapter 9
DETAILS OF MINING LEASES OF THE DISTRICT

List of mine holder in Nagpur District:

Sr. No.	Name of the Lease Holder	Mouza	Tahsil	Survey No.	Area in HR	Validity Period (Yrs)	From Date	To Date	Land Govt/Pvt
1	S K mehta through Ashish Mehta	Sayki	Umred	153/5	2.02	5	03/11/2018	02-11-2023	Pvt
2	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	Umred	142	4.80	5	10-12-2018	09-12-2023	Pvt
3	Sanjay Raghunath Tidke	Haladgaon	Umred	30, 57/2	3.97	5	30/10/2018	29-10-2023	Pvt
4	Murli Govindram Wadhwani	Pachgaon	Umred	427	1.21	5	11-12-2018	10-12-2023	Pvt
5	Dilip Madhukar Sambare	Haladgaon	Umred	60	3.90	5	21-12-2018	20-12-2023	Pvt
6	Tushar Chandrakant Wekhande	Undri	Umred	71, 69	1.26	5	20-03-2019	19-03-2024	Pvt
7	Nagsen Zinger Lokhande	Surgaon	Umred	192	1.00	EC 22/04/2023	23-04-2019	22-04-2023	Pvt
8	Sunil Gangadhar Kimmatkar	Surgaon	Umred	354/1	5.50	10	28-05-2013	27-05-2023	Govt
9	Sukhdyal Lalchand Arora	Surgaon	Umred	354/1	5 Acre	EC 29/11/2022	02-02-2013	11-02-2023	Govt
10	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	Umred	368	2.00	10	25-06-2013	24-06-2023	Govt
11	Nitin Krushnarao Vaidya	Surgaon	Umred	354	2.50 Acre	10	15-02-2013	14-02-2023	Govt
12	Priya Pradip Kolhe	Pachgaon	Umred	510, 511	1.60	5	29-11-2017	28-11-2022	Pvt
13	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	Umred	37/1	1.74	5	08-11-2016	07-11-2021	Pvt
14	AEC Metals through Sanjay Vijaywargiya	Sayki	Umred	125/2	1.90	5	20-03-2019	19-03-2024	Pvt

15	Karan Shyamkumar Jaiswal	Pachgaon	Umred	429	2.06	5	09-05-2019	08-05-2024	Pvt
16	M/s D C Gurubakshani	Pachgaon	Umred	494/1, 494/2	2.50	5	01-06-2017	31-05-2022	Pvt
17	Abdul Quadir Mo. Ismail	Surgaon	Umred	195	8 Acre	10	17-09-2014	16-09-2024	Govt
18	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	Umred	66, 67, 68, 71, 72	3.92	5	02-12-2016	01-12-2021	Pvt
19	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	Umred	18/1	1.20	5	20-03-2017	19-03-2022	Pvt
20	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	Umred	146, 148	3.00	5	20-03-2019	19-03-2024	Pvt
21	Murli Govindram Wadhwani	Pachgaon	Umred	426	2.30	5	27-11-2018	26-11-2023	Pvt
22	Black Rock Crusher through Ramandip Bindra	Haladgaon	Umred	210, 211, 212	4.95	5	02-05-2018	01-05-2023	Pvt
23	M/s Siddheshwar Infra through Shyam Jaiswal	Pachgaon	Umred	479/2, 479/3	2.04	5	17-01-2018	16-11-2023	Pvt
24	Vishal Ajay Jaiswani	Haladgaon	Umred	81, 83	4.54	5	03-11-2018	02-11-2023	Pvt
25	Sureshkumar Bhagwandas Kunjwani	Surgaon	Umred	368	3 Acre	10	10-10-2014	09-10-2024	Govt
26	M/s Ashokwan Enterprises through Kalpana Bhende	Surgaon	Umred	368	5.50 Acre	10	17-09-2014	16-09-2024	Govt
27	Manoj Trilokchand Arora	Salaimendha	Umred	27	1.47	5	05-01-2021	17-12-2024	Pvt
28	S K Mehta & Co. through Arvind Sureshkumar Mehta	Pachgaon	Umred	147/1, 147/2, 149	4.90	5	01-11-2018	30-10-2023	Pvt
29	Vinod Ramkaran Mittal	Surgaon	Umred	368	2.02	10	24-07-2015	23-07-2025	Govt
30	Santoshkumar Tekchand Gangwani	Pachgaon	Umred	505	2.13	5	02-12-2016	01-12-2021	Pvt
31	Pawankumar Satyanarayan Bihani	Salaimendha	Umred	30	1.57	5	05-12-2017	04-12-2022	Pvt

32	M/s AEC Minerals through Shailabh Radheshyam Vijaywargiya	Sayki	Umred	124/1, 124/2	3.40	5	20-03-2017	19-03-2022	Pvt
33	Pramod Ramkarandas Mittal	Surgaon	Umred	341	5 Acre	10	10-09-2015	09-09-2025	Govt
34	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	Umred	78/1	1.20	5	20-03-2017	19-03-2022	Pvt
35	Devendra Suryabhanji Shirbhate	Salaimendha	Umred	37/2	1.00	5	11-01-2017	10-01-2022	Pvt
36	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	Umred	512/2, 513	1.88	5	14-11-2018	13-11-2023	Pvt
37	Khushal Bapurao Bhoyar	Pachgaon	Umred	450/3	1.50	5	06-12-2016	05-12-2021	Pvt
38	Vinod Gulabrao Pillare	Salaimendha	Umred	16/1	1.01	5	07-10-2017	06-10-2022	Pvt
39	Sundar D Khatri	Surgaon	Umred	368	1.15	10	29-06-2015	28-06-2025	Govt
40	Anand Eknath Lokhande	Surgaon	Umred	354/1, 353	1.10	10	31-01-2015	30-01-2025	Govt
41	Harinarayan Shyamsundar Gupta	Pachgaon	Umred	351	3.25 Acre	5	13-12-2016	12-12-2021	Pvt
42	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	Umred	64	2.36	5	02-05-2019	01-05-2024	Pvt
43	M/s Siddheshwar Infrastructure through Shyam L Jaiswal	Pachgaon	Umred	480/1, 480/4	4.25	5	22-11-2016	21-11-2021	Pvt
44	Tekchand Gurumal Gangwani	Pachgaon	Umred	540, 546/4, 535, 536/1	3.00	5	15-03-2017	14-03-2022	Pvt
45	Ashwin Sureshkumar Mehta	Paradgaon	Umred	153	4.11	5	01-11-2018	30-10-2023	Pvt
46	Sachin Laxmikant Pitale	Surgaon	Umred	359	1.75	5	14-11-2018	13-11-2023	Pvt
47	Rajesh Shardanand Jaiswal	Khapri (Raja)	Umred	76/1	0.21	5	01-11-2018	31-10-2023	Govt

48	Sitaram Parasram Kamble	Khapri (Raja)	Umred	76/1	0.80	5	06-08-2018	05-08-2023	Govt
49	M/s B R Aakre	Khapri (Raja)	Umred	79	1.37	5	30-01-2018	29-01-2023	Govt
50	Nitin Krushnarao Vaidya	Surgaon	Umred	354	5 Acre	10	15-02-2013	14-02-2023	Pvt
51	Vyankateshwara Basalt Corporaton TRANSFER to Anil Jayram Panchbudhe	Pachgaon	Umred	523/2, 523/3	1.60	5	20/04/2017, 22/06/2019	19-04-2022	Pvt
52	N D Enterprises through Nikunj D Shah	Surgaon	Umred	368	2.00	10	29-09-2011	28-09-2021	Govt
	S N Enterprises through Suresh Kungwani	Surgaon	Umred	368	4.00	10	29-09-2011	28-09-2021	Govt
54	Harcharansingh Ranjeetsingh Bhatiya	Surgaon	Umred	368	7 Acre	10	10-10-2014	09-10-2024	Govt
55	Sweta Stone Through Shashikant Awaghate	Salaimendha	Umred	29/2-1	1.00	5	29-11-2017	28-11-2022	Pvt
56	Bhagwanjibhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhwani, Mayur M Wadhwani	Pachgaon	Umred	521/2	2.66	5	14/11/2018, 22/02/2019	13-11-2023	Pvt
57	Amol Prabhakar Pillare	Salaimendha	Umred	18/2	1.20	5	07-12-2017	06-12-2022	Pvt
58	Rahul Maniram Yadav	Haladgaon	Umred	77/1	2.91	5	01-12-2018	30-11-2023	Pvt
59	Shri Purushottam Bhimji Patel	Pachgaon	Umred	516, 517	1.96	5	19-05-2020	17-12-2024	Pvt
60	Karan Shyamkumar Jaiswal	Pachgaon	Umred	480/2	1.38	5	17-11-2018	16-11-2023	Pvt
61	Shri Altaf Ahmad	Surgaon	Umred	354/1	4 Acre	10	30-03-2019	29-03-2023	Govt
62	Shri Altaf Ahmad	Surgaon	Umred	354/1	3 Acre	10	29-05-2013	28-05-2023	Govt
63	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	Nagpur Rural	229/2	1.77	5	23-11-2016	22-11-2021	Pvt
64	Akash Ghanshyam Gangwani	Khadgaon	Nagpur Rural	234	2.02	5	30-07-2020	29-07-2025	Pvt

65	Tulsabai Ganesh Hiranwar	Lawa	Nagpur Rural	236	1.91	5	21-01-2017	20-01-2022	Pvt
66	Murli Govindram Wadhwani	Khadgaon	Nagpur Rural	152	2.71	5	09-12-2016	08-12-2021	Pvt
67	Santoshkumar Yaduka	Navegaon	Nagpur Rural	21/1	2.02	5	01-08-2017	31-07-2022	Pvt
68	Zoeb Sadikbhai Wali & Others	Pitesur	Nagpur Rural	43	3.77	5	20-08-2020	05-05-2023	Pvt
69	Arvind Janrao Gajbhiye	Salai Godhani	Nagpur Rural	186/2, 186/3	2.59	5	16-12-2016	15-12-2021	Pvt
70	Vijay Kumar Onkarmal Yadukar	Navegaon	Nagpur Rural	45/1	1.78	5	05-06-2017	04-06-2022	Pvt
71	Radha Stone Industries through Pawan S Bihani	Salai Godhani	Nagpur Rural	206/1, 206/2	1.21	5	06-12-2016	05-12-2021	Pvt
72	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaon	Nagpur Rural	171/2	1.00	5	20-04-2017	19-04-2022	Pvt
73	Mohini Vijay Naik	Khadgaon	Nagpur Rural	225	1.56	5	14-12-2017	13-12-2022	Pvt
74	Shri Ram Govindram Wadhwani	Khadgaon	Nagpur Rural	171/3	2.44	5	09-12-2016	08-12-2021	Pvt
75	Prakash Wamanrao Atkar	Mahurzari	Nagpur Rural	148, 149, 150, 163	3.00	5	16-11-2018	15-11-2023	Pvt
76	Smt. Sultana Habib Baig	Mahurzari	Nagpur Rural	148, 149, 150, 163	1.01	5	06-07-2021	11-05-2023	Pvt
77	Ghanshyam Gurumal Gangwani	Khadgaon	Nagpur Rural	239	1.83	5	30-07-2020	29-07-2025	Pvt
78	Nayan Jamnadas Makdiya	Navegaon	Nagpur Rural	30/7, 30/9	2.00	5	19-11-2016	18-11-2021	Pvt
79	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	Hingna	109/1	4.90	5	28-11-2017	27-11-2022	Pvt
80	Harish Dashrath Fulsunge	Singardip (Rithi)	Hingna	96	1.43	5	09-03-2018	08-03-2023	Pvt
81	Shri Anil Balkisan Hiranwar	Panjari	Hingna	61/2	1.18	5	27-09-2017	26-09-2022	Pvt
82	Rajesh Ramkisan Nikhare	Singardip (Rithi)	Hingna	137/1	1.62	5	22-11-2017	21-11-2022	Pvt

83	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	5	16-07-2019	15-07-2024	Pvt
84	Quality Minerals through Mo. Samir Rangunwala	Mhasala	Hingna	109/1	4.90	5	28-11-2017	27-11-2022	Pvt
85	Altaf Ahmad Majid Ahmad	Sawangi Aasola	Hingna	67	2.81	10	29-01-2015	23-02-2025	Govt
86	Ashish Anand Durugkar	Kohla	Hingna	6/1	1.47	5	20-03-2019	19-03-2024	Pvt
87	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	Hingna	68	2.00	10	28-08-2015	27-08-2025	Govt
88	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	Hingna	86/1	2.83	5	20-03-2017	19-03-2022	Pvt
89	Kailash Pandurang Thakre	Panjari	Hingna	68	2.00	10	28-08-2015	27-08-2025	Govt
90	Nandkishor Burade	Mohgaon Zilpi	Hingna	28/2	1.80	5	01-02-2017	31-01-2022	Pvt
91	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	Hingna	161/2, 162	1.61	5	20-12-2017	19-12-2022	Pvt
92	Mayuresh Mukund Hardas	Haladgaon	Hingna	146	5 Acre	10	05-10-2013	04-10-2023	Govt
93	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	1.20	5	31-07-2020	21-12-2023	Pvt
94	Radheshyam Durugkar	Haladgaon	Hingna	146	10 Acre	10	18-10-2013	17-10-2023	Govt
95	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	Hingna	186	4.00	10	17-09-2014	16-09-2024	Govt
96	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa	Sawangi (D)	Hingna	186	4.00	10	17-09-2014	16-09-2024	Govt

	Sahakari Sanstha (SR-9)								
97	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	Hingna	186	4.00	10	17-09-2014	16-09-2024	Govt
98	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	Hingna	186	4.00	10	08-07-2014	07-07-2024	Govt
99	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	Hingna	186	4.00	10	08-07-2014	07-07-2024	Govt
100	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	Hingna	186	4.00	10	08-07-2014	07-07-2024	Govt
101	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardip (Rithi)	Hingna	136	2.07	5	26-10-2017	25-10-2022	Govt
102	Ashish Anand Durugkar	Haladgaon	Hingna	146	5 Acre	10	19-08-2014	18-08-2024	Govt
103	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	Hingna	146	10 Acre	10	17-09-2014	16-09-2024	Govt
104	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	Hingna	186	4.00	10	10-10-2014	09-10-2024	Govt
105	President, Cargo Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	Hingna	186	4.00	10	10-10-2014	09-10-2024	Govt
106	President, Cargo Prakalpgrast Berojgar Bahu-	Sawangi (D)	Hingna	186	4.00	10	10-10-2014	09-10-2024	Govt

	Uddeshiya Sewa Sahakari Sanstha (SR-19)								
107	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	Hingna	194/3, 194/5	2.83	5	31/01/2019, 30/07/2019	30-01-2024	
108	Rushi Ramesh Agrawal	Metaumri	Hingna	101	3 Acre	10	16-03-2015	15-03-2025	Govt
109	Mahesh Arvind Sabne	Haladgaon	Hingna	146	5 Acre	10	26-09-2013	25-09-2023	Govt
110	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	3.36	5	23-11-2020	22-10-2025	Pvt
111	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardip (Rithi)	Hingna	148	2.22	5	25-01-2017	24-01-2022	Pvt
112	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	5	06-11-2018	05-11-2023	Pvt
113	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardip (Rithi)	Hingna	92	3.00	5	03-05-2018	02-05-2023	Pvt
114	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	Hingna	55/2, 55/3	1.21	05/05/2023	29-01-2021	05-05-2023	Pvt
115	Kamal R. Agrawal	Mhasala	Hingna	125,126	1.97	17/12/2024	05-01-2021	17-12-2024	Pvt
116	Ashok Hiraman Umathe	Chhatrapur	Saoner	218	3 Acre	5	27-09-2017	26-09-2022	Pvt
117	Tushar Madan Umathe	Chhatrapur	Saoner	85/1	1.87	5	26-04-2021	25-04-2026	Pvt
118	Umesh Nagorao Nimje	Chhatrapur	Saoner	197	1.07	5	01-01-2018	31-12-2022	Pvt
119	Sudhakar Bapurao Bandhekar	Chhatrapur	Saoner	213	2.00	5	17-03-2016	16-09-2021	Pvt
120	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	Saoner	74/3	1.89	5	21-07-2020	20-07-2025	Pvt

121	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	Saoner	204, 207	3.14	5	05-06-2020	05-05-2023	Pvt
122	Pravin Sukhdev Bhaiswar	Borgaon (Jangli)	Saoner	100, 101	4.30	5	17/05/2019	16-05-2024	Pvt
123	M/s Om Saibaba Constructon Through Ajay G Batra	Kawadasi (Barad)	Bhiwapur	113	4.00	5	11-07-2020	10-07-2025	Pvt
124	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	Bhiwapur	43/1, 42/2, 42/3	4.49	5	11-07-2020	10-07-2025	Pvt
125	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	Kalmeshwar	347 Old, 94 New	2.20	5	03-07-2017	02-07-2022	Govt
126	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	Kalmeshwar	93/1	0.84	10	01-12-2014	30-11-2024	Pvt
127	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	Kalmeshwar	87/1	7.38 Acre	5	16-11-2016	15-11-2021	Pvt
128	Sureshkumar R Jagyasi	Khapri (Uma)	Kalmeshwar	91	1.16	5	01-04-2017	31-03-2022	Pvt
129	Ram Govindram Wadhwani	Khapri (Uma)	Kalmeshwar	55/6	1.21	5	02-05-2018	01-05-2023	Pvt
130	Vijay Ramchandra Kukreja	Khapri (Uma)	Kalmeshwar	90	1.75	5	18-03-2019	17-03-2024	Pvt
131	M/s Luky Metal thru Mahesh M. pinjani	undri	Umred	72	1.07	05-01-2021 to17-12-2024	25-02-2021	17-12-2024	Pvt
132	ketankumar arunkumar singh	Chhatrapur	Saoner	72/1,72/2	3.72	05-05-2023	27-07-2021	05-05-2023	Pvt

Chapter 10
DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected in lakhs are as follows**.**

Sr. No.	Year	Target	(Rs in Lakh) Total Collection
1	2021-2022 (till December 2021)	20978.00	10148.71
2	2020-2021	20700.00	18329.59
3	2019-2020	12575.16	4861.13
4	2018-2019	15067.87	57709.07
5	2017-2018	13500.00	44601.00
6	2016-2017	9300.00	31100.00
7	2015-2016	7200.00	27000.00

Table10.1: Details of royalty collected

Chapter 11
DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL

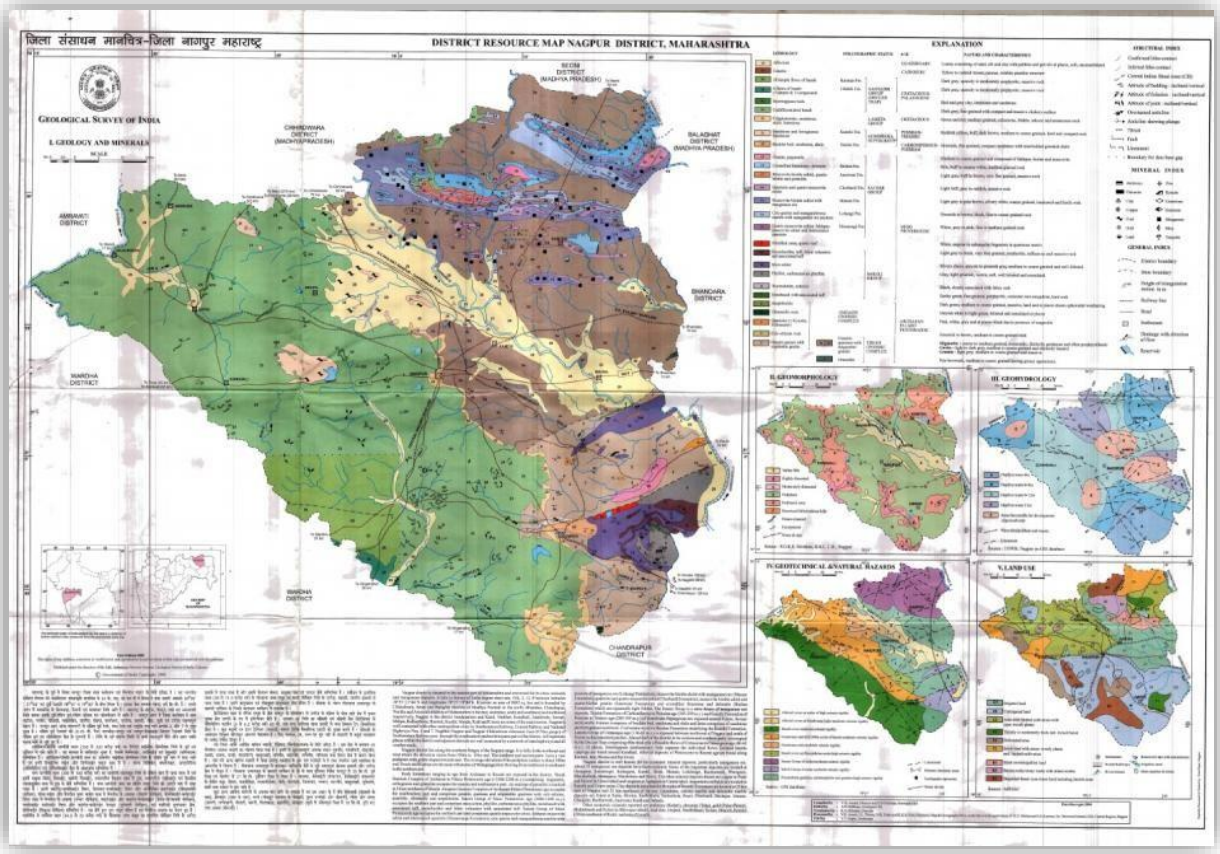
In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Table 11.1: Details of production of minor mineral:

Sr. no.	Year	Quantity (In Brass)
1	2021-2022(Till Dec 2021)	2004550
1	2020-2021	481887
2	2019-2020	367087
3	2018-2019	3766967
4	2017-2018	6142500
5	2016-2017	3389750
6	2015-2016	2275200

Chapter 12
MINERAL MAP OF THE DISTRICT



Source: Geological Survey of India

Chapter 13
LIST OF LETTER OF INTENT (LOI) HOLDERS IN NAGPUR DISTRICT

Sr.No	Name	Village Name	Taluka	Survey No.	Hectore	LOI issue Date
1	Nandkishor Ramteke	Singardeep Rithi	Hingna	25	1.41	21/7/2018
2	Jyoti Ramteke	Singardeep Rithi	Hingna	26	1.41	21/7/2018
3	Neeti Agrawal	Singardeep Rithi	Hingna	138/1,2,3	4.69	27/8/2018
4	Shyam Wahane	Singardeep Rithi	Hingna	94	1.43	16/3/2019
5	Rrushiraj Infra C/o Tarun Hiranwar	Savangi	Hingna	190	1.14	8/11/2019
6	Kahid Johar Ibrahim Gondiawala	Kohla	Hingna	6/2	3.23	11/5/2020
7	Rahul Yadao	Haldgaon	Umred	77/1	2.91	3/9/2018
8	Rahul Patel	Uti	Umred	97/1	2.60	3/9/2018
9	Rambhau Musle	Uti	Umred	95/2, 95/3	3.25	11/2/2019
10	Subhash Grovar	Sukli Pai.	Umred	89/2, 89/3	3.25	11/2/2019
11	Chirag Jain	Pardgaon	Umred	150/2, 150/3	1.70	11/2/2019
12	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	158/2, 158/3 158/6	4.93	2/7/2019
13	Pawanputra Concrete C/o Amit Taori	Sayki	Umred	147/1,2,3,4	4.82	8/7/2019
14	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	131/1,2,3,4,5	4.91	8/7/2019
15	Purshottam Patel	Umred	Umred	516, 517	1.96	13/9/2019

16	Manish Mishra	Sayki	Umred	163/1	2.33	20/9/2019
17	Mayank Mishra	Sayki	Umred	163/2	2.32	21/9/2019
18	Vinod Choukase	Masalkund	Umred	20/1	3.63	30/9/2019
19	Yogesh Taori	Kawdsi (Barad)	Umred	28/1, 28/2, 28/3	4.98	9/10/2019
20	P.L.Agraval C/o Paras Agraval	Sayki	Umred	140/4, 141, 142	5.00	9/10/2019
21	Tekchand Gangwani	Pachgaon	Umred	546/6, 546/7	3.83	13/12/2019
22	Vandna stone crusher C/o Gaorav Jichkar	Uti	Umred	144	1.29	6/1/2020
23	Vandna stone crusher C/o Omraj Jichkar	Uti	Umred	145	1.70	6/1/2020
24	Jash Techno Treders	Bhivapur (Uti)	Umred	67	3.07	26/2/2020
25	Rahul Patel	Uti	Umred	97/1, 97/2	3.00	24/6/2020
26	Shoiab Shadikbhai Vali	Pitesur	Nagpur Gramin	43	3.77	11/2/2019
27	Pankaj Khadse	Salaigodhani	Nagpur Gramin	184/1	2.73	28/2/2019
28	Amir Siyab Vali	Pitesur	Nagpur Gramin	54	1.74	16/3/2019
29	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	206/1/1	1.22	29/11/2019
30	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	184/2	1.21	6/1/2020
31	Kulind Mankar	Khadgaon	Nagpur Gramin	158	1.01	11/5/2020

32	Sarla Hiranwar	Mahurjhari	Nagpur Gramin	238/2	2.02	17/6/2020
33	Raja Patel	Borgaon Jan.	Saoner	133/2	1.80	4/8/2018
34	Dric Infra. C/o Nilima Dahake	Borgaon Jan.	Saoner	120/2	1.30	24/12/2019
35	Om Saibaba C/o Ajay Batra	Kavdsi (Barad)	Bhivapur	113	4.00	9/10/2019
36	B.V.M.Crusher LTD	Chargaon (go)	Bhivapur	35/1	4.28	6/3/2020
37	Bediwale Enterprises Pvt. Ltd.	Kavdsi (Barad)	Bhivapur	107/2 ब	1.62	29/7/2020
38	Shyam Vadhwani	Khapri (Uma)	Kalmeshwar	83/2	0.89	11/11/2019
39	Harish Kevalramani	Khapri (Uma)	Kalmeshwar	55/7	0.81	10/2/2020
40	Sandeep Surajbhan Gupta	Pachgaon	Umred	570/2	1.74	10/13/2020
41	Dilip Madhukar Sambare	Haladgaon	Umred	62, 63, 208	3.63	10/13/2020
42	Block Rock C/o Ramandeep Bindra	Haladgaon	Umred	86/1, 88, 89/1, 89/3 91/1 , 91/2, 91/3, 210/211/212/1, 210/211/212/2	16.40	10/13/2020
43	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	102 (Part) 104, 105, 106/2, 107, 108,111, 112/1, 112/2 ,113	14.80	12/9/2020
44	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	59/1 ,59/2, 59/3, 59/5, 81, 82/1, 82/2, 83, 84, 86/2, 89/2, 89/4	19.12	12/9/2020
45	Partha Shyam Jaiswal and Karan Shyam Jaiswal	Masalkund	Umred	35, 36, 41	12.77	1/25/2021

46	Anil Sadashiv Vat	Salaimendha	Umred	8, 9	9.98	1/25/2021
47	Irshan Majid Shete	Metaumri	Hingna	86/2	4.00	2/8/2021
48	Tushar Madanrao Umathe	Chatrapur	Saoner	85/1	1.87	2/8/2021
49	Prashant Aanandrao Durugkar	Kohla	Hingna	7	1.92	2/25/2021
50	Mesars. Paras Stone Industries Pro. Sunil Ns. Mishra	Singardeep Rithi	Hingna	24/1	4.73	2/24/2021
51	Habib Rhib Beg	Mahurjhari	Nagpur Gramin	162/3	1.41	3/12/2021
52	Nitin Kedar Kamble	Salaimendha	Umred	57	2.02	5/27/2021
53	Praful Prakash Dewalkar	Uti	Umred	131, 132, 133, 134, 135/1, 137, 138, 139	7.12	5/28/2021
54	P.L.Agrawal	Sayki	Umred	138, 140/3, 140/4, 141, 142	4.00	5/28/2021
55	Dhyaneshwar Shankar Nimbalkar	Junevani	Saoner	45	2.83	6/11/2021
56	Mihir Tarun Hiranwar	Panjari	Saoner	61/4	1.18	7/2/2021
57	Omprakash Dwarkadas Gurubakshani	Pachgaon	Umred	495/1	2.02	7/7/2021
58	Rohit Sonbaji Musle	Chatrapur	Umred	208, 209, 211	2.31	7/7/2021
59	Ram Govindrao Wadhwani	Kadgaon	Saoner	171/3	2.44	8/11/2021
60	Murli Govindram Wadhwani	Kadgaon	Nagpur Gramin	152	2.71	8/11/2021
61	Mayank Ramprakash Mishra	Sayki	Umred	163/1, 163/2	4.65	8/31/2021
62	Rajesh Ldharam Madhwani	Navegaon	Nagpur Gramin	37	2.30	8/30/2021

Chapter 14
TOTAL MINERAL RESERVE AVAILABEL IN THE DISTRICT

Minerals	Quantity
Basalt	155.22 Mill. Tonnes
Murrum	31.04 Mill. Tonnes
Soil	15.22 Mill Tonnes
Sand (For year 2021-2022)	1.56 Mill. Tonnes

CHAPTER 15
QUALITY GRADE OF MINERAL

The miner mineral depots in the District are quite good in respect of quality and quantity. The method of mining should be adopted Opencast Mining Method for digging, excavation and removal of stone with the help of traditional drilling and blasting methods.

Basalt stone is used as bouldersof different sizes for dam construction, embankment work etc. After crushing into different sizes, it can be used in construction and road propjets. Fine grained compact basalt and Medium grained sandstone type of aggregateis availablein the district so that the quality of stone available in Nagpur district is building grade stone confirming IS standards IS:7779 (Part ll/Sec 3) of 1979 and also in terms of strength it is confirming IS standards IS: 1121 (Part 2 to 4)1974

CHAPTER 16
USE OF THE MINERAL

Basalt:

Basalt is used for a wide variety of purposes. It is most commonly crushed for use as an aggregate in construction projects. Crushed basalt is used for the rod base, concrete aggregate, asphalt pavement aggregate, railroad ballast, filter stone in drain fields, and may other purpose. Basalt is also cut into dimension stone. Thin slabs of basalt are cut and sometimes polished for used as floor tiles, building veneer, monuments, and other stone objects.

Moorum:

Moorum is also a type of soil, mostly used for construction pourpose. Generally, it is deep brown or red in color. Moorum is used in plinth filling, road pavements, backfilling in trenches, footing pits etc. It is a suitable type of soil in the construction field, since it does not contain any organic matters and can be compacted easily forming hard surface.

Ordinary Sand/ River Sand

Sand is very useful material in all type of construction activities. It is mainly used as one of the important item in concrete mix and used for plastering work.

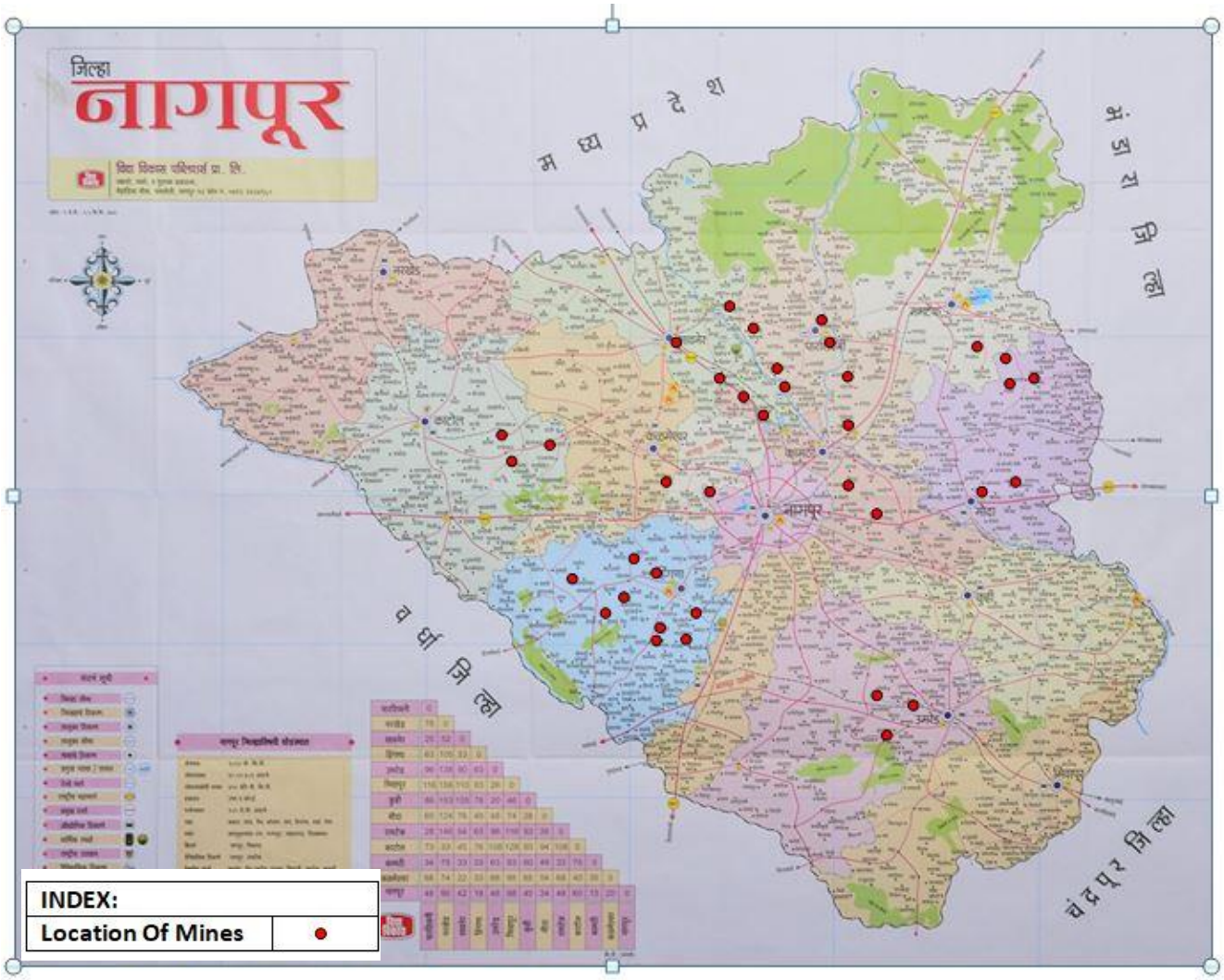
CHAPTER 17
DEMAND AND SUPPLY OF THE MISERAL:

Basalts are the ultrabasic igneous rocks which are an importantcomponent in construction of anykind. These are used as building stone, in railway ballastand most important is used in concrete as important raw materialwhere they are availablein abundance. Along with the increasing need of developing infrastructure there is an increase in demands of basalt.As it has high compressive strength, high shear strength, it proves to be a compact, stable and sound rock which make difficult for anything to replace. The rock might be omnipresent all over the Maharashtra but a compact, un-weathered rock is present in very limited quantities.

Table: Demand and Sapply

Sr.No.	Year	Production(Brass)	Dispatched Quantity (Brass)
1	2020-2021	530075.7	481887
2	2019-2020	367087	31379
3	2018-2019	3766967	3766967
4	2017-2018	6142500	6142500
5	2016-2017	3389750	3389750
6	2015-2016	2275200	2275200

CHAPTER 18
MINING LEASES MARK ON MAP



CHAPTER 19
DETAILS OF THR AREA OF WHERE THERE IS A CLUSTER OF MINING LEASE

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pachgaon									
1	Priya Pradip Kolhe	Pachgaon	510, 511	1.60	5	29-11-2017	28-11-2022	23-05-2018	
2	Karan Shyamkumar Jaiswal	Pachgaon	429	2.06	5	09-05-2019	08-05-2024	17-06-2019	
3	M/s D C Gurubakshani	Pachgaon	494/1, 494/2	2.50	5	01-06-2017	31-05-2022	13-07-2017	
4	Murli Govindram Wadhwani	Pachgaon	426	2.30	5	27-11-2018	26-11-2023	15-03-2019	
5	M/s Siddheshwar Infra through Shyam Jaiswal	Pachgaon	479/2, 479/3	2.04	5	17-01-2018	16-11-2023	06-02-2019	
6	S K Mehta & Co. through Arvind Sureshkumar Mehta	Pachgaon	147/1, 147/2, 149	5.16	5	01-11-2018	30-10-2023	19-11-2018	
7	Santoshkumar Tekchand Gangwani	Pachgaon	505	2.13	5	02-12-2016	01-12-2021	08-12-2016	
8	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	512/2, 513	1.88	5	14-11-2018	13-11-2023	26-11-2018	
9	Khushal Bapurao Bhoyar	Pachgaon	450/3	1.50	5	06-12-2016	05-12-2021	21-12-2016	
10	Harinarayan Shyamsundar Gupta	Pachgaon	351	3.08	5	13-12-2016	12-12-2021	17-02-2016	
11	M/s Siddheshwar Infrastructure through Shyam L Jaiswal	Pachgaon	480/1, 480/4	4.25	5	22-11-2016	21-11-2021	08-12-2016	
12	Tekchand Gurumal Gangwani	Pachgaon	540, 546/4, 535, 536/1	4.55	5	15-03-2017	14-03-2022	27-03-2017	

13	Vyankateshwara Basalt Corporaton TRANSFER to Anil Jayram Panchbudhe	Pachgaon	523/2, 523/3	1.60	5	20/04/2017, 22/06/2019	19-04-2022	09-10-2020	
14	Bhagwanjibhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhwani, Mayur M Wadhwani	Pachgaon	521/2	2.66	5	14/11/2018, 22/02/2019	13-11-2023	29-12-2018	
15	Shri Purushottam Bhimji Patel	Pachgaon	516, 517	1.96	5	19-05-2020	17-12-2024	24-06-2020	
16	Karan Shyamkumar Jaiswal	Pachgaon	480/2	1.38	5	17-11-2018	16-11-2023	26-03-2019	
17	Murli Govindram Wadhwani	Pachgaon	427	1.21	5	11-12-2018	10-12-2023	15-03-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sayaki									
1	S K mehta through Ashish Mehta	Sayki	153/5	2.02	5	03/11/2018	02-11-2023		
2	AEC Metals through Sanjay Vijaywargiya	Sayki	125/2	1.90	5	20-03-2019	19-03-2024	18-09-2019	
3	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	146, 148	4.82	5	20-03-2019	19-03-2024	04-10-2019	
4	M/s AEC Minerals through Shailabh Radheshyam Vijaywargiya	Sayki	124/1, 124/2	3.40	5	20-03-2017	19-03-2022	27-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Sanjay Raghunath Tidke	Haladgaon	30, 57/2	3.97	5	30/10/2018	29-10-2023	10-12-2018	
2	Dilip Madhukar Sambare	Haladgaon	60	3.90	5	21-12-2018	20-12-2023	16-01-2019	
3	Black Rock Crusher through Ramandip Bindra	Haladgaon	210, 211, 212	5.68	5	02-05-2018	01-05-2023	05-06-2018	
4	Vishal Ajay Jaiswani	Haladgaon	81, 83	7.04	5	03-11-2018	02-11-2023	17-12-2018	
5	Rahul Maniram Yadav	Haladgaon	77/1	2.91	5	01-12-2018	30-11-2023	30-01-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Mayuresh Mukund Hardas	Haladgaon	146	5 Acre	10	05-10-2013	04-10-2023	19-11-2007	Govt
2	Radheshyam Durugkar	Haladgaon	146	10 Acre	10	18-10-2013	17-10-2023	08-10-2013	Govt
3	Ashish Anand Durugkar	Haladgaon	146	5 Acre	10	19-08-2014	18-08-2024	25-07-2014	Govt
4	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	146	10 Acre	10	17-09-2014	16-09-2024		Govt
5	Mahesh Arvind Sabne	Haladgaon	146	49.85	10	26-09-2013	25-09-2023	26-09-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Undri									
1	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	142	14.89	5	10-12-2018	09-12-2023	10-12-2018	
2	Tushar Chandrakant Wekhande	Undri	71, 69	1.26	5	20-03-2019	19-03-2024	03-06-2019	
3	M/s Luky Metal thru	undri	72	1.07	05-01-2021	25-02-2021	17-12-2024	07-07-2021	

	Mahesh M. pinjani				to17-12-2024				

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Surgaon									
1	Nagsen Zinger Lokhande	Surgaon	192	1.00	EC 22/04/2023	23-04-2019	22-04-2023	03-05-2019	
2	Sunil Gangadhar Kimmatkar	Surgaon	354/1	29.91	10	28-05-2013	27-05-2023	06-05-2013	Govt
3	Sukhdyal Lalchand Arora	Surgaon	354/1	29.91	EC 29/11/2022	02-02-2013	11-02-2023	05-02-2013	Govt
4	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	368	86.77	10	25-06-2013	24-06-2023	29-05-2013	Govt
5	Nitin Krushnarao Vaidya	Surgaon	354	29.91	10	15-02-2013	14-02-2023		Govt
6	Abdul Quadir Mo. Ismail	Surgaon	195	12.55	10	17-09-2014	16-09-2024	15-07-2014	Govt
7	Sureshkumar Bhagwandas Kunjwani	Surgaon	368	86.77	10	10-10-2014	09-10-2024	11-08-2014	Govt
8	M/s Ashokwan Enterprises through Kalpana Bhende	Surgaon	368	86.77	10	17-09-2014	16-09-2024	20-08-2014	Govt
9	Vinod Ramkaran Mittal	Surgaon	368	86.77	10	24-07-2015	23-07-2025		Govt
10	Pramod Ramkarandas Mittal	Surgaon	341	23.74	10	10-09-2015	09-09-2025	28-08-2015	Govt
11	Sundar D Khatri	Surgaon	368	86.77	10	29-06-2015	28-06-2025	30-04-2015	Govt
12	Anand Eknath Lokhande	Surgaon	354/1, 353	30.27	10	31-01-2015	30-01-2025	17-11-2014	Govt
12	Sachin Laxmikant Pitale	Surgaon	359	1.75	5	14-11-2018	13-11-2023	20-12-2018	
13	Nitin Krushnarao Vaidya	Surgaon	354		10	15-02-2013	14-02-2023		
14	N D Enterprises through Nikunj D Shah	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
15	S N Enterprises through Suresh Kungwani	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
16	Harcharansingh Ranjeetsingh Bhatiya	Surgaon	368	86.77	10	10-10-2014	09-10-2024	19-08-2014	Govt
17	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	30-03-2019	29-03-2023	08-03-2013	Govt

18	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	29-05-2013	28-05-2023	08-03-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salaimendha									
1	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	37/1	2.06	5	08-11-2016	07-11-2021	08-11-2016	
2	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	66, 67, 68, 71, 72	3.92	5	02-12-2016	01-12-2021	19-01-2017	
3	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	18/1	1.20	5	20-03-2017	19-03-2022	31-03-2017	
4	Manoj Trilokchand Arora	Salaimendha	27	1.47	5	05-01-2021	17-12-2024	06-04-2021	
5	Pawankumar Satyanarayan Bihani	Salaimendha	30	1.57	5	05-12-2017	04-12-2022	14-12-2017	
6	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	78/1	1.20	5	20-03-2017	19-03-2022		
7	Devendra Suryabhanji Shirbhate	Salaimendha	37/2	2.00	5	11-01-2017	10-01-2022	11-01-2017	
8	Vinod Gulabrao Pillare	Salaimendha	16/1	1.01	5	07-10-2017	06-10-2022	23-10-2017	
9	Sweta Stone Through Shashikant Awaghate	Salaimendha	29/2-1	1.00	5	29-11-2017	28-11-2022	16-01-2018	
10	Amol Prabhakar Pillare	Salaimendha	18/2	1.20	5	07-12-2017	06-12-2022	06-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi (D)									
1	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	186	4.00	10	17-09-2014	16-09-2024	17-04-2014	Govt

2	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	186	4.00	10	17-09-2014	16-09-2024	17-04-2014	Govt
3	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	186	4.00	10	17-09-2014	16-09-2024	17-04-2014	Govt
4	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	186	4.00	10	08-07-2014	07-07-2024		Govt
5	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	186	4.00	10	08-07-2014	07-07-2024		Govt
6	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	186	4.00	10	08-07-2014	07-07-2024		Govt
7	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	186	4.00	10	10-10-2014	09-10-2024		Govt
8	President, Cargo Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	186	4.00	10	10-10-2014	09-10-2024		Govt
9	President, Cargo Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	186	4.00	10	10-10-2014	09-10-2024		Govt

10	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	194/3, 194/5	2.83	5	31/01/2019, 30/07/2019	30-01-2024	27-11-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khadgaon									
1	Akash Ghanshyam Gangwani	Khadgaon	234	2.02	5	30-07-2020	29-07-2025	22-02-2016	
2	Murli Govindram Wadhwani	Khadgaon	152	2.71	5	09-12-2016	08-12-2021	29-12-2016	
3	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaon	171/2	1.78	5	20-04-2017	19-04-2022	04-05-2017	
4	Mohini Vijay Naik	Khadgaon	225	1.56	5	14-12-2017	13-12-2022	06-06-2018	
5	Shri Ram Govindram Wadhwani	Khadgaon	171/3	2.44	5	09-12-2016	08-12-2021	29-12-2016	
6	Ghanshyam Gurumal Gangwani	Khadgaon	239	1.83	5	30-07-2020	29-07-2025		

Sr. No.	Name of the Lease Holder	Village	Tahsil	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Singardip (Rithi)										
1	Harish Dashrath Fulsunge	Singardip (Rithi)	Hingna	96	1.43	5	09-03-2018	08-03-2023	23-05-2018	
2	Rajesh Ramkisan Nikhare	Singardip (Rithi)	Hingna	137/1	1.62	5	22-11-2017	21-11-2022	15-12-2017	

3	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	5	16-07-2019	15-07-2024	29-08-2019	
4	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	2.72	5	31-07-2020	21-12-2023	27-10-2020	
5	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardip (Rithi)	Hingna	136	2.07	5	26-10-2017	25-10-2022	30-11-2017	Govt
6	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	6.51	5	23-11-2020	22-10-2025	23-11-2020	
7	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardip (Rithi)	Hingna	148	2.22	5	25-01-2017	24-01-2022	25-01-2017	
8	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	5	06-11-2018	05-11-2023	14-12-2018	
9	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardip (Rithi)	Hingna	92	9.80	5	03-05-2018	02-05-2023	21-05-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khapri (Raja)									
1	Rajesh Shardanand Jaiswal	Khapri (Raja)	76/1	1.45	5	01-11-2018	31-10-2023	26-11-2018	Govt
2	Sitaram Parasram Kamble	Khapri (Raja)	76/1	2.02	5	06-08-2018	05-08-2023	05-12-2018	Govt
3	M/s B R Aakre	Khapri (Raja)	79	3.94	5	30-01-2018	29-01-2023	03-12-2018	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mahurzari									
1	Prakash Wamanrao Atkar	Mahurzari	148, 149, 150, 163	7.82	5	16-11-2018	15-11-2023		
2	Smt. Sultana Habib Baig	Mahurzari	148, 149, 150, 163	1.01	5	06-07-2021	11-05-2023	30-07-2021	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Bhiwapur (Ooty)									
1	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	64	2.36	5	02-05-2019	01-05-2024	10-06-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Paradgaon									
1	Ashwin Sureshkumar Mehta	Paradgaon	153	4.62	5	01-11-2018	30-10-2023	19-11-2018	

Sr. No.	Name of the Lease Holder	Mouza	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Lawa									
1	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	229/2	1.77	5	23-11-2016	22-11-2021	09-12-2016	
2	Tulsabai Ganesh Hiranwar	Lawa	236	1.91	5	21-01-2017	20-01-2022	21-01-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Santoshkumar Yaduka	Navegaon	21/1	2.02	5	01-08-2017	31-07-2022	09-08-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pitesur									
1	Zoeb Sadikbhai Wali & Others	Pitesur	43	3.77	5	20-08-2020	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khapri (Uma)									
1	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	93/1	0.84	10	01-12-2014	30-11-2024	29-09-2014	
2	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	87/1	3.00	5	16-11-2016	15-11-2021		
3	Sureshkumar R Jagyasi	Khapri (Uma)	91	3.19	5	01-04-2017	31-03-2022	20-04-2017	
4	Ram Govindram Wadhwani	Khapri (Uma)	55/6	1.21	5	02-05-2018	01-05-2023	01-06-2018	
5	Vijay Ramchandra Kukreja	Khapri (Uma)	90	1.75	5	18-03-2019	17-03-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Chhatrapur									
1	Ashok Hiraman Umathe	Chhatrapur	218	2.47	5	27-09-2017	26-09-2022		
2	Tushar Madan Umathe	Chhatrapur	85/1	1.87	5	26-04-2021	25-04-2026	30-06-2021	
3	Umesh Nagorao Nimje	Chhatrapur	197	1.07	5	01-01-2018	31-12-2022		
4	Sudhakar Bapurao Bandhekar	Chhatrapur	213	2.00	5	17-03-2016	16-09-2021		

5	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	74/3	1.89	5	21-07-2020	20-07-2025		
6	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	204, 207	3.14	5	05-06-2020	05-05-2023	25-06-2020	
7	ketankumar arunkumar singh	Chhatrapur	72/1,72/2	3.72	05-05-2023	27-07-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Panjari									
1	Shri Anil Balkisan Hiranwar	Panjari	61/2	1.18	5	27-09-2017	26-09-2022	02-11-2017	
2	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
3	Kailash Pandurang Thakre	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
4	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	55/2, 55/3	2.96	05/05/2023	29-01-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mhasala									
1	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
2	Quality Minerals through Mo. Samir Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
3	Kamal R. Agrawal	Mhasala	125,126	1.97	17/12/2024	05-01-2021	17-12-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kawadasi (Barad)									
1	M/s Om Saibaba Constructon Through Ajay G Batra	Kawadasi (Barad)	113	5.47	5	11-07-2020	10-07-2025	20-08-2020	
2	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	43/1, 42/2, 42/3	4.49	5	11-07-2020	10-07-2025	24-08-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salai Godhani									
1	Arvind Janrao Gajbhiye	Salai Godhani	186/2, 186/3	2.59	5	16-12-2016	15-12-2021		
2	Radha Stone Industries through Pawan S Bihani	Salai Godhani	206/1, 206/2	1.21	5	06-12-2016	05-12-2021	13-12-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Vijay Kumar Onkarmal Yadukar	Navegaon	45/1	1.78	5	05-06-2017	04-06-2022	09-08-2017	
2	Nayan Jamnadas Makdiya	Navegaon	30/7, 30/9	2.00	5	19-11-2016	18-11-2021	12-09-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi Aasola									
1	Altaf Ahmad Majid Ahmad	Sawangi Aasola	67	2.81	10	29-01-2015	23-02-2025	22-02-2025	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kohla									
1	Ashish Anand Durugkar	Kohla	6/1	1.47	5	20-03-2019	19-03-2024	06-05-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khairi Khurd									
1	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	86/1	2.83	5	20-03-2017	19-03-2022	21-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mohgaon Zilpi									
1	Nandkishor Burade	Mohgaon Zilpi	28/2	1.80	5	01-02-2017	31-01-2022	01-02-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Mandav Ghorad									
1	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	161/2, 162	2.01	5	20-12-2017	19-12-2022	15-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Metaumri									
1	Rushi Ramesh Agrawal	Metaumri	101	3 Acre	10	16-03-2015	15-03-2025	24-02-2015	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Borgaon (Jangli)									
1	Pravin Sukhdev Bhaiswar	Borgaon (Jangli)	100, 101	4.30	5	17/05/2019	16-05-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Nimji									
1	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	347 Old, 94 New	2.20	5	03-07-2017	02-07-2022	15-01-2018	Govt

CHAPTER 20
DETAILS OF ECO-SENSITIVE AREA

In Nagpur District there are following Eco sensitive zones

1) Umred Karandala Wildlife Sanctuary
2) Pench National Park and Mansinghdeo Wildlife Sanctuary
3) Bor Wildlife Sanctuary.

CHAPTER 21
IMPACT ON THE ENVIRONMENT DUE TO MINING ACTIVITY:

The baseline environment quality to represent the background / existing environmental scenario of various environmental components such as air, noise, land ecological and socio-economic status of the study area.All the mine owners in the district assured to follow stipulated conditions of EC for sustainable and environment friendly mining.

1. Impact on Air Environment

The baseline status for air environment includes reconnaissance, identification and selection of specific significant air pollution dueto the project activityand measuring their existing levels. The data required to assess the ambient status was collected, analysed and evaluated through a well-designed to assess the ambient air quality monitoring (AAQM) network.

Sources:

- Fugitive dust emissionduring mining activities inside the Quarry area like site preparationdrilling, blasting, excavation Loading of material transport and dumping of the stone
- Some amount of SO_2 NOxand CO will be generated due to plying of mine machinery like Excavator, compressors, Jack Hammer, etc and transporting vehicles.

2. Impact on Water Environment:

Since the mining activity is related to excavation of stone, well above ground water table of the areawater contamination is not likely to be there.As basalt is nontoxic material so any contactof water withmaterial doesnot produceany toxis pollutant. If there is a need of dewatering for the mine then NOC will be opted from competent authority.

3. Impact on Noise Environment:

The main objective of noise monitoring in the study area is to establish the baseline noise levels and assess the impact of the total noise expected to be generated during the project operations in the project site.

Sources:

The main sources of noise pollution are identified as

- Mining activities inside the Quarry area like Drilling, Blasting, loading.
- Noise generated due to transporting vehicles.

4. Impacts due to Ground Vibration and Fly Rocks.

- The major source of ground vibration from the mine is blasting, however controlled blasting activity is being carried out. The major impact of the ground vibrations is on the domestic houses located in the villages surrounding the mine lease area. The kuchha houses are moreprone to cracks and damage due to the vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements
- Another impact due to blasting activities is fly rocks. These may effect on the houses nearby the mining lease area and may cause injury to humans and animals.

5. Impact on Flora and Fauna

In the District most of the mine leases proposed on barren or scantly vegetated area so minimal impact is observed on existing flora, however in some cases trees needs to be cut down for mining activities and prior approval for it will take from competent authority. All existing and proposed mine leases is will be away from forest area and wild life sanctuaries, so minimal impact is observed on wild life.

6. Impact on Land Environment:

The topography of the mine lease area altered due to on-going/ proposed mining activities it will be altered further due to the proposed mining operations as per the approved mining plan. Due to mining operations, mine pits and dumps are being developed within the mine lease area.

7. Impact on Socioeconomics:

Critically analyzing the existing environmental status of the socio-economic profile and visualizingthe scenario with the project, the impacts of the project would be varied and may generate positive impacts of the mining in the region that are stated below:

. The mining operations will provide direct & indirect employment village people.

. The villages and their inhabitants & domestic animals will not be disturbed due to mining as quarry is far from their settlements.

. Local work force will be given first preference for employment.

. Mining activities will benefit the local people due to provision of more infrastructural facilities (developments of approach routes within the village area).

Currently there are 40 existing mining leases in the District and as per area of the mine leases10-20 people are engaged by direct employment i.e. 400-800 people employed.

CHAPTER 22
REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT

Particulars	Details	
Air Quality Management	**Adoption scientific mining methods to reduce dust emission from point and line source:** Scientific methods of mining and pollution control systems are being will be adopted in the mine to control dust emissions from point and line sources, as follows: **Point Source:** These includes drilling, blasting, loading, unloading, manual sizing and grading activities • Use of wet drilling/ drills with dust arrestors to control dust generation during drilling activities • Blasting to be avoided during high winds and overcast conditions. • Controlled blasting by using delay detonators is already adopted. • Avoiding secondary blasting by use of rock breakers. • Water sprinkling on blasted material before loading • Reducing dropping height of excavator bucket while loading material into dumpers/tippers. • Reducing dropping height for trucks during unloading. • Provision of mobile tanker for water sprinkling arrangement **Line Source:** These includes Haul roads & approach roads • Development of plantation along approach road. • Periodic maintenance of tippers dumpers used for Mineral transport • Periodic maintenance of haul roads • Regular water sprinkling on haul roads.	
	Monitoring	• Periodic air quality monitoring will be done and adequate measures will be taken
Noise Management	Standard specified mining equipment is being /will be used and the equipment will be in good working conditions, properly lubricated and maintained to keep Noise within permissible limits. Drilling is being will be carried out with sharp drill bits which help in reducing noise and same will be continued Controlled blasting with proper spacing and optimum charge/delay will be Maintained. Tall trees with heavy foliage are being /will be planted along the boundary of mining lease area which will act as a natural barrier to propagating noise. Regular noise monitoring is being /will be carried at project site to check compliance with prevailing rules. Personal Protective Equipment's (PPEs) like ear plugs/car muffs are provided.	

Particulars	Details
Vibration	• Blasting will be carried out by person with blaster's certificate issued by DGMS or by outside agency necessary. • Safety tools and implements that are required will be kept adequately near blasting site at the time of charging. • Portable blasting shelter will be provided near the blasting site

	• Blasting will be preferably done during 12.30PM to 2.00 PM depending on seasonal variation of break hours or the end of the day in order to ensure that no person or animals are within the blasting zone. • Misfires will be handled carefully as per stipulated procedures. • Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
Greenbelt Development	Plantation will be carried out at the approach road and vicinity area to control Dust, Air & Noise Pollution and improve aesthetic environment.
Water Environment	• Construction of garland drains and settling tanks to divert surface run-off of the mining area to the natural drainage. • Construction of checks dams/ gully plugs at strategic places to arrest silt wash off from broken up area. • Retaining wall and garland drain and adequate treatment system like settling ponds shall be provided around the OB dump for proper surface runoff management • The mined out pits shall be converted in to the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure. • Periodic analysis of mine pit water and ground water quality in nearby villages are to be undertaken. • Domestic effluent if any from mine shall be discharged to soak pit via septic tank constructed as per BIS specification. • Water conservation measures shall be taken by rain water harvesting and recycling and reuse of treated mine water after getting NOC from competent authority.

CHAPTER 23
RECLAMATION

As per the Government order and rule the applicant has to submit Mine Plan with Mine Closure Plan for their respective leases Reclamation of the mined out pit by way of back filling will not be possible because of the existence of the mineral up to deeper depth. The quarry depth will not be blocked and the quarry owner may exploit the same and precede further deep after taking clearances according to acts and rules applicable hence the detailed Quarry Closure Plan will be submitted further. Top soil would be utilized for intensive plantation and green belt development along the quarry area.

As generation waste is much less as in the case minor mineral mining, then following action taken place:

1. Plantation on the broken up surface if the depth of quarry is not much below the surrounding surface level.

2. Converted water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level.

3. It is preferred to encircle the abundant either wire fencing or retaning wall with plantation from the safety point of view.

CHAPTER 24
RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Hazard analysis involves the identification and quantification of various hazards (unsafe conditions) that will exist in the mines. On the other hand, risk analysis deals with the identification and quantification of risks, mining equipment and personnel are exposed to, due to accidents resulting from the hazards present in the mine. Risk analysis follows an extensive hazard analysis. It involves the identification and assessment of risks the neighboring populations are exposed to as a result of hazards present.

In the sections below, the identification of various hazards, probable risks, maximum credible accident analysis, and consequence analysis are addressed which gives a broad identification of risks involved. Based on the risk estimation disaster management plan has to be prepared.

The mining will be carried out under the management control and direction of a qualified Mine Manager holding a first class manager's certificate of competency. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert.

Mining is among the most hazardous activities all around the world, being always accompanied with different accidents, injuries, loss of lives, and land damages. Dimension stone quarrying constitutes a big portion of mining activities. In risk assessment the words Hazards and Risks are often used and it is necessary to be clear what Hazards and Risks are:

- A hazard is anything that has the potential to cause harm
- The risk is how likely it is that a hazard may cause actual harm.

Having defined the work to be undertaken, risk assessment will give a clearer picture of what could go wrong and how serious an accident could be. It will depend upon following a set model which will enable the risk to be assessed.

Hazard identification at Stone quarry site

Hazard identification and risk assessment is a continual process. At mining operation following could be the main hazard:

- ❖ Drilling operation
- ❖ Blasting operation
- ❖ Health Hazard
- ❖ Accident at site/crusher
- ❖ Transportation
- ❖ Natural hazards

It is performed to identify whatever could cause injury, damage, ill-health, financial loss and loss of reputation to the organization. Hazard identification is an analysis to determine whether a risk agent under plausible conditions would cause harm to population or the environment.

Mitigation measures

A) Drilling:

1. Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
2. Deep wetting of drilling zones shall be done by water sprinkling before starting drilling.
3. During the drilling operations the efforts shall be made to reduce dust generation by taking appropriate measures

B) Blasting:

1. Proper blasting geometry shall be designed.
2. Blast site shall be wetted before and after blasting operations are completed.
3. Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation.
4. Blasting shall be conducted only during favorable weather conditions and only during the day time and permissible hours.
5. The blasting operations shall be given publicity the local area through Announcement and other available media so that local people become aware of the blasting activities being undertaken in the area.
6. The vibrations should be monitored periodically in consultation with the local Mining authorities.
7. The storage of the explosives and its transfer to and from the quarry area shall be strictly in accordance with the conditions listed in the permission granted by Explosives Department

C) Heavy Earth moving Machinery (HEMM):

1. The operator/ transporter shall carry out regular maintenance of the machinery and vehicles.
2. The speed limit shall be adhered to
3. Operator's cabin of the HEMMs should preferably be air conditioned at least air tight.
4. The smoke emission should conform to the standards notified in Motor Vehicle Act.
5. The trucks carrying the mined products shall be covered with tarpaulin so that there are no fugitive emissions during transportation.
6. The transportation should not through the busy roads in the city/towns/villages if by pass roads are available.

D) Haul Roads:

1. All the haul and roads shall be mettled and well maintained.
2. Unmettled haul roads shall be free of ruts and pot holes.
3. All haul roads and surface roads shall be regularly sprayed with water.
4. Plantation alongside haul roads (avenue plantation) shall be carried out done.

E) Overburden:

1. Non-operative dumps shall be subjected to technical and biological reclamation.
2. Plantation over and around over burden stability of slopes, prevention of dust by wind action and soil erosion during the run off. Wetting of surface of O. B. dump shall be regularly practiced.

Occupational Health & Safety Measures to Control Dust Inhalation

All the necessary precautions would be adopted to prevent dust generation at site and to be dispersed in the outside environment. However, for the safety of workers at site, engaged at strategic locations/dust generation points like loading and unloading points, dust masks would be provided Dust masks would prevent inhalation of RPM thereby reducing the risk of

lung diseases and other respiratory disorders. Regular health monitoring of workers will be carried out.

Health and Safety Monitoring Plan

All the potential occupational hazardous work places would be monitored regularly. The health of employees working in these areas would be monitored once in two years for early detection of any ailment due to exposure to plant operation.

Personal Protective Equipment (PPE):

The following PPE will be provided to the persons working in the quarry area:

- Steel-Shoed Industrial Safety Shoes
- Safety Helmet
- Earmuffs and Earplugs by workers, who are working in areas.
- Safety Goggles & Safety Belts

Disaster Management Plan

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation and restoration of production. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel training should be given.

The objective of the Disaster Management Plan is to make use of the combined resources of the mine and the outside services to achieve the following:

- Effect the rescue and medical treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment,
- Initially contain and ultimately bring the incident under control;
- Secure the safe rehabilitation of affected area
- Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.
- Emergency escape route will be designated.

CHAPTER 25
OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT

As all the precautions are taken during mining operations, no health issues are found till date (2016-20).

CHAPTER 26
PLANTATION AND GREENBELT DEVELOPMENT IN RESPECT OF LEASES ALREADY GRANTED IN THE DISTRICT

Plantation and greenbelt development is as per approved mining scheme for respective leases previously granted in the District and all proposed lease holder are adhere to comply with the stipulated conditions mentioned in the EC. As per the Approved Environmental Clearance General Condition Point No.10 Green belt development is carried out by lease holder in mine lease area along 7.5m barrier.

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), Maharashtra)

To,

The District Mining Officer
OFFICE OF DISTRICT COLLECTOR,NAGPUR
Ravindra Nath Tagore Marg, Civil Lines, Nagpur -440001

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/MH/MIN/253223/2022 dated 14 Feb 2022. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22B001MH152570**
2.	**File No.**	SIA/MH/MIN/253223/2022
3.	**Project Type**	New
4.	**Category**	B2
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Environment Clearance for Proposed Sand Ghat (M L Area 4.20 ha) at Survey No 285, 286, 287 (Part) at Village Gosewadi A, Taluka Saoner, District Nagpur
7.	**Name of Company/Organization**	OFFICE OF DISTRICT COLLECTOR,NAGPUR
8.	**Location of Project**	Maharashtra
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 11/05/2022

(e-signed)
Manisha Patankar Mhaiskar
Member Secretary
SEIAA - (Maharashtra)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. SIA/MH/MIN/253223/2022
Environment & Climate
Change Department
Room No. 217, 2nd Floor,
Mantralaya, Mumbai- 400032.

To
District Mining Officer,
Nagpur

Subject: Environmental clearance for Proposed sand ghat at Gut No. 285, 286, 287 (Part), Area in 4.20 Ha, at, Village Gosewadi A, Tehsil Saoner District- Nagpur, by District Mining Officer Nagpur.
Reference: SIA/MH/MIN/253223/2022

This has reference to your communication on the above mentioned subject. The proposal was considered by the SEAC-1 in its 220th meeting of held on 11th to 13th April, 2022 under screening category 1 (a) B2 as per EIA Notification, 2006 and recommended to SEIAA. Proposal then considered in 242nd meeting (Day-4) of State Level Environment Impact Assessment Authority (SEIAA) held on 04th May, 2022.

2. Brief Information of the project submitted by you is as below:-

Village Name	Sand Mining Quantity in brass	Name of River	Total area in Ha.	Area dimensions Length x Breadth x Depth in meters	EMP Cost in Rs. Lakhs	Plantation along the approach road (number of trees)	Plantation along the river bank (number of trees)	Date of Public Hearing	Budget proposed for compliance of issues raised in Public Hearing in Rs. Lakhs
Gosewadi A	7420	Kanhan	4.20	420 x 100 x 0.5	7.80	590	210	21.01.2022	--

3. The proposal has been considered by SEIAA in its 242nd meeting and decided to accord Environment Clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implantation of following terms and conditions-

Specific Conditions:

A. SEAC Conditions-

1. DMO to demarcate the proposed sand ghat with geo-referencing clearly providing adequate space for necessary infrastructure and facilities as presented in the layout.
2. The District Collector shall ensure that, the final lease be granted only after ensuring the river bed is dry. No sand mining activity be carried out if there is water in the river bed.
3. The District Collector shall ensure that, the approach road from the proposed sand ghat to the sand storage depot is properly identified and demarcated with the consent of the concern land owners before issuing final lease document.

4. PP to monitor the groundwater level during sand quarrying operations, a network of existing wells may be established around the sand quarrying area and piezometers shall be installed at all sand quarry sites. Monitoring of Groundwater Quality in the vicinity (one kilometre radius from the sand quarrying site) shall be carried out once in two months
5. PP to ensure that, suitable depots shall be located in the vicinity of the sand quarry site to facilitate the sale of sand. While selecting the site for depots, it must be ensured that the site is within 25 km from the sand quarry site and has an area of around 10-15 Acres with parking facility and proper entry and exit for smooth movement of the vehicles. The depot site shall preferably be a Government land, foreshore area of tank bund etc. near an NH/SH/MDR/ODR. In the absence of any Government land in the vicinity, private land may be leased out and rent fixed as per the approved Government rates applicable there in.
6. PP to identify the central 3/4th part of river on map where there is a deposition of sand and remaining 1/4th area needs to be kept as no mining zone for the protection of the bank.
7. PP to install permanent boundary pillars at the identified area of the aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundaries on each side of the bank shall not be more than 100 meters.
8. PP to ensure that no mining activity is carried out below the depth as approved by the Competent Authority.
9. PP to make sure that the Environmental Management Plan as presented shall be included in the lease agreement to be signed with the lease holder and ensure its implementation.
10. Any unspent budget for EMP and CER will be transferred to District Mining Fund and will be used for CER/Plantation activities in consultation with District Collector.
11. PP to ensure that, the distance of mining activity area from the river bank shall be 1/4th of the river bed width and should not be less than 7.5 meters.
12. PP to ensure that, sand shall not be extracted up to a distance of 1 km from bridges and highways on both sides, or five times (5x) of the span (x) of bridge, public civil structure (including water intake point) on upstream side and ten times (10 x) the span of such bridge on downstream side, subjected to a minimum of 250 meters on the upstream and 500 meters on the downstream side.
13. The District Collector shall define the transportation route from the mining lease considering the maximum production from the mines, size of mining lease, their location, the quantity of mineral that can be mined safely etc considering the movement of trucks/ tippers/tractors for the villages having habitation shall be avoided.
14. PP to ensure following additional measures are to be provided by the leaseholder to prevent any vehicle from transporting sand out of the lease area bypassing the IT enabled system,

    A. To provide one entry and exit point for vehicles. In case it is necessary to have more than one entry/exit all such points have check points all digital monitoring facilities as mentioned in the Enforcement and Monitoring Guidelines issued by MoEF&CC in January 2020. All other possible ways of entry /exit shall be closed using barriers. All provisions shall be made to not make it possible for any vehicle to enter or exit without entry into the computerized system.

    B. All such point shall have 24x7 CCTV coverage, the footage of which shall be submitted to the District Collector by the lease holder at mutually agreed frequencies
15. The route of mineral transportation vehicle from source to destination shall be tracked through the system using checkpoints, Radio-frequency identification (RFID) tags, and GPS tracking
16. PP shall carry out sand mining by manual method only. No mechanical /electrical/power driven devices shall be used for sand mining purpose
17. PP to ensure no stream is diverted due to proposed sand mining activity

18. PP to ensure that mining/ loading activity shall be restricted to day hours' time only. No mining activity shall be carried out after sunset and before sun rise
19. PP to ensure that, no heavy vehicles like truck, dumper etc. should ply in the river bed.
20. PP to ensure that, there is no damage to any fauna and its nesting close to the sand mining if any
21. PP to ensure that adequate measures like maintenance of roads, sprinkling of water and plantation is carried out to reduce the dust particulate matter pollution
22. PP to provide movable bio toilets to the workers working in the area and the sewage generated shall be properly collected and treated so as to confirm to the standards prescribed by MoEF&CC and CPCB
23. PP to ensure that parking shall be done at designated place only and shall not be on Public roads or in the river bed
24. The sand transportation shall be carried out through the covered vehicles only and the vehicles carrying the mineral shall not be overloaded
25. PP to provide PP kits to all workers and First Aid facility at the proposed mining site. PP to impart safety induction training to all workers, impart daily safety briefing to workers, and carry out safety mock drill at least once a month
26. PP to provide gabion structures of random rubble masonry (no wire mesh to be used) at 200 m interval, if length of sand ghat more than 200 m., as per Sand Mining Guidelines of IBM vide letter 296/7/2000/MRC dated 16 May 2011.
27. The District Collector to ensure strict compliance of all conditions stipulated in the Environmental Clearance. The District Collector should strictly monitor the compliance of the conditions stipulated in the Environment Clearance letter. Gram Dakshata Samiti to ensure that sand mining is limited to stipulated depth and quantity.
28. PP to ensure strict compliance of Enforcement & Monitoring Guidelines published by the MoEF&CC in January 2020
29. PP to adhere to the provisions stipulated in the Sustainable Sand Mining Guidelines issued by MoEF&CC, Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013 and Sand Extraction Policy issued by Maharashtra Government in Revenue and Forest Department
30. The District Collector and District Mining Officer shall ensure that there is no violation of any order with respect to the sand mining activity passed by the Competent Court. (Particularly, the directions given by Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP (C) Nos. 19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No. 171/2013 & 173/2018 be strictly followed.
31. PP to obtain NOC from the Grampnchayat to use village road for transportation of mined material.
32. PP to submit details of green development in the district for the sand ghats to which Environmental Clearance was issued last year.
33. PP to ensure that, the transportation route of mined material shall not pass through the village it should be bypassed so as to avoid road damages, unforeseen accidents and adverse impact on the villagers.
34. PP to obtain necessary NOC from the forest department if the transportation route is passing through the forest area.
35. PP to submit implementable plan to avoid erosion during sand mining due to concave nature of the sand ghat if any.

B. <u>SEIAA Conditions-</u>

1. DMO to adhere to the conditions stipulated by SEAC-1.

2. District Collector to personally monitor/ ensure strict compliance of the condition no 6,8,10,11,15,16,18,19 and 23 mentioned in SEAC MoM.

General Conditions:

I. District Collector and District Mining Officer to ensure the directions given by Hon'ble National Green Tribunal, Pune in Appeal No 10/2013 (WZ) dated 1st October 2013 as bellow- However, we direct that when further auctioning process is required to be conducted, ordinarily, the sand beds falling between the sand beds which are now already auctioned shall be avoided unless there is special certification issued by the competent authority which would indicate absence of any environmental damage, having regard to precautionary principle which is required to be adopted. We mean to say, it should not happen that presently the sand beds are auctioned by keeping distance of 1 k.m. from each other and gap is filled up subsequently under one or another pretext.

II. Distance between lease area to be marked as per actual shape and size, on Village Map or authenticated map available with Revenue Authority and ensure provisions regarding distance between two lease area and total lease area in the OM dated 24th December 2013 issued by MoEF.

III. The validity of EC to the above mentioned sand block satisfying stipulated conditions is up to 30th September, 2022.

IV. District Collector and District Mining Officer to ensure the directions given by Hon'ble National Green Tribunal, Pune in application no 44/2014 (Paramjeet Singh kalsi Vs MoEF&CC & Others) dated 19.10.2015 as below-

i) After the grant of 'Environment Clearance' to District Mining Officer, and once the Lessee or Transferee or actual person who is going to execute the mining activity or sand exploration, is decided, 'Environment Clearance' shall be transferred in the latter's name as per procedure in Clause No. 11 of the EC Notification.

ii) District Mining Officer will forward the proposal to SEIAA for transfer of Environment Clearance to Lessee or Transferee.

iii) The concerned Tahsildar of that area will be the Authority for conducting periodic inspections, site visits and attending to complaints of violation etc. Tahsildar will visit the site to verify whether the concerned Lessee or Transferee, after transfer of Environment clearance on their name, have followed the conditions stipulated in the Environment clearance.

iv) In respect of cases of violation of conditions of Environment clearance, the Tahsildar will submit his report to the District Collector and District Collector will send the report to SEIAA with his/her observations.

V. Project proponent to follow the standard environmental conditions for sand mining of sustainable sand mining management guidelines 2016, issued by MoEF & CC.

VI. Project proponent to ensure the strictly implementation of Environment management plan.

VII. District Collector to ensure that conditions stipulated in the Government Resolution (G.R.) dated 31.01.2018 issued by Revenue and Forest Department, Government of Maharashtra (GoM) is implemented in letter and spirit.

VIII. Sand excavation is allowed only for the Reti Guts having sand deposition more than 2 m and excavation should be for layers above 2 m of sand deposit as recommended by GSDA.

IX. The instructions of MoEF & CC in the Sustainable sand mining guidelines 2016 [regarding sand mining approval and tracking system and transport of excavated sand] should be followed.

X. District Collector to ensure that every receipt given is serially scanned and registration number so generated must be written on such receipt to avoid duplication and unauthorized transportation of the sand.

XI. Project Proponent to ensure that vehicles transporting sand should not be overloaded beyond stated capacity.

XII. The District collector should ensure that mining will be done strictly up to the depth recommended by GSDA.

XIII. The green belt development /tree plantation will be made either on river bank or along road side.

XIV. Measures for prevention & control of soil erosion and management of silt shall be undertaken.

XV. Project Proponent to ensure that there is no violation of the Supreme Court order and orders of the National Green Tribunal given in the related matters.

XVI. Project Proponent & District Mining Officer will be held individually responsible for non-compliance of the conditions stipulated in the Environmental clearance and shall be liable for legal action under Environment (Protection) Act of 1986.

XVII. Transport of sand should be through vehicle which is properly covered with Tarpaulin and it should not be overloaded.

XVIII. Project Proponent to ensure that the mining plan is approved by Director of Geology and Mining comprising study to show that annual replenishment of sand in the mining lease area is sufficient to sustain the mining operations at levels prescribed in the mining plan and that the transport infrastructure is adequate to transport the mined material.

XIX. Provisions stipulated in Maharashtra Minor Minerals Extraction (development and Regulation) Rules 2013 and Government Resolution of Revenue and Forest Department dated 03.01.2018 shall be strictly fallowed by Project proponent.

XX. The depth of sand layer to be mined, after retaining 2 m minimum layer below, should not be more than 2 meters as per Government Resolution of Revenue Department dated 03.01.2018 e.g. if the total depth of sand is 3 m, only up to one meter of sand shall be mined.

XXI. Project Proponent or District Collector will take bank guarantee up to 2% of the total auction cost for the given auction period from the Lessee to ensure the compliance of the conditions stipulated. In case of violation of stipulated conditions by the Lessee, bank guarantee so obtained shall be forfeited and legal action under the law should initiated against such Lessee.

XXII. The distance 3 m or 10 % of the width of river whichever is more will be kept intact as a no mining zone.

XXIII. No cutting of the trees shall be done while excavating the sand or while constructing the access road to sand ghat.

XXIV. All mining shall be carried out manually.

XXV. Underwater mining shall not be permitted without the specific expert sanction of the State Government only for prevention of flood and increasing the capacity of reservoir if any.

XXVI. It shall be ensured that excavation of minor mineral does not disturb or change the underlying soil characteristics of the river bed /basin, where mining is carried out.

XXVII. It shall be ensured that mining does not in any way disturb the turbidity, velocity and flow pattern of the river water.

XXVIII. It shall be ensured that there is no fauna dependent on the river bed or areas close to mining for its nesting is disturbed.

XXIX. Turtle nesting units conservation is very important. Therefore sand mining in such areas is to be prohibited.

XXX. Precise mining area will be jointly demarcated at site by officials of Mining/Revenue department prior to mining operations for all proposals under consideration. Such site plan, duly verified by competent authority shall be submitted to Environment Department.

XXXI. All necessary statutory clearances shall be obtained before start of mining operations.

XXXII. No mining shall be carried out in the live streams.

XXXIII. Mining shall be limited to day hours time only.

XXXIV. No mining shall be carried out in the safety zone of any bridge and/or embankment.

XXXV. No mining shall be carried out in the vicinity of natural/ manmade archaeological sites.

XXXVI. The lease holder shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and groundwater), if required for the project.

XXXVII. Waste water, if any, shall be properly collected and treated so as to conform to the standards prescribed by MoEF/CPCB.

XXXVIII. No wildlife habitat will be infringed.

XXXIX. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, if applicable to this project.

XL. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/Horticulture Officer.

XLI. Parking of vehicles should not be made on public places.

XLII. Transportation of materials shall be done by covering the trucks / tractors with tarpaulin or other suitable mechanism so that no spillage of mineral/dust takes place.

XLIII. It shall be ensured that there is no leakage of oil and grease from the vehicles used for transportation.

XLIV. Special Measures shall be adopted to prevent the nearby settlements from the impacts of mining activities. Maintenance of roads through which transportation of minor minerals is to be undertaken, shall be carried out regularly.

XLV. Provision for first-aid, medical health care safe drinking water, and sanitation etc. shall be provided at site.

XLVI. Ambient air quality will be monitored at the site and the nearest habitation regularly. Ambient air quality at the boundary of the precise mining area shall conform to the norms prescribed by MoEF & CC, GOI.

XLVII. Measures shall be taken for control of noise level to the limits prescribed by CPCB.

XLVIII. Any change in mining area, khasra /Gat numbers, entailing capacity addition with change in process and or mining technology, modernization and scope of working shall again require prior Environmental Clearance as per provisions of EIA Notification, 2006 (as amended).

XLIX. SEAC appraised the proposals on the basis of information submitted by concerned District Mining Officer. Mining Officer shall submit the list of blocks satisfying conditions stipulated above to Revenue & Environment dept. The list of blocks and conditions stipulated above shall be made available in public domain.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

9. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Manisha Patankar Mhaiskar
(Member Secretary, SEIAA) 9/5/2022

Copy to:

1. Chairman, SEIAA (Maharashtra), Mumbai.
2. Secretary, MoEF & CC, IA- Division MOEF & CC
3. Member Secretary, Maharashtra Pollution Control Board, Mumbai.
4. Regional Office MoEF & CC, Nagpur
5. District Collector, Nagpur
6. Regional Officer, Maharashtra Pollution Control Board, Nagpur

Revenue Department
Government of Maharashtra

mahakhanij

Lifting Report

Mineral: Sand, Plot Type: Quarry
From Date: 04/07/2022 To Date: 04/07/2022
State: Maharashtra, Division: Nagpur
District: Nagpur, Taluka: Savner
Order Level: District, Permit Type: TTP

Print Date: 4/7/2022, 1:47:26 pm

Sr No.	Plot Type	Plot Name	Order No.	Lifting Date Range	Lifting Till Date	Allowed
10	Quarry	Mouja- Gosewadi- A	Kra.Khani-2/Kaksh-2/Sand Ghat Auction /Kawi-334/2022 Date-24/05/2022	0	7420	7420

Distt. Mining Officer
Nagpur.

Revenue Department
Government of Maharashtra

mahakhanij

eTP Report

State: Maharashtra, Division: Nagpur
District: Nagpur, Taluka: Savner
From Date: 01/05/2022 To Date: 10/06/2022
Plot Type: Quarry, Plot: Mouja- Gosewadi- A

Print Date: 4/7/2022, 1:50:07 pm

Brass Km

Sr No.	Taluka	Plot Type	Plot Name	eTP No.	VehicleNo.	Validity From	Validity Upto	Mineral	Quant	Distanc	Destination
1	Savner	Quarry	Mouja- Gosewadi- A	4933815	MH28AB7876	10/06/2022 5:28PM	10/06/2022 5:58PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
2	Savner	Quarry	Mouja- Gosewadi- A	4933481	MH40BG9899	10/06/2022 5:13PM	10/06/2022 5:43PM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
3	Savner	Quarry	Mouja- Gosewadi- A	4933429	MH40N5605	10/06/2022 5:11PM	10/06/2022 5:41PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
4	Savner	Quarry	Mouja- Gosewadi- A	4933384	MH40AK9133	10/06/2022 5:09PM	10/06/2022 5:39PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
5	Savner	Quarry	Mouja- Gosewadi- A	4933355	MH40Y3070	10/06/2022 5:08PM	10/06/2022 5:38PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
6	Savner	Quarry	Mouja- Gosewadi- A	4933312	MH40CD5599	10/06/2022 5:06PM	10/06/2022 5:36PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
7	Savner	Quarry	Mouja- Gosewadi- A	4933256	MH40BL5821	10/06/2022 5:04PM	10/06/2022 5:34PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
8	Savner	Quarry	Mouja- Gosewadi- A	4933187	MH40CD5821	10/06/2022 5:01PM	10/06/2022 5:31PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
9	Savner	Quarry	Mouja- Gosewadi- A	4933163	MH40AK8056	10/06/2022 5:00PM	10/06/2022 5:30PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
10	Savner	Quarry	Mouja- Gosewadi- A	4933127	MH49AT5453	10/06/2022 4:58PM	10/06/2022 5:28PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
11	Savner	Quarry	Mouja- Gosewadi- A	4933111	MH17BY6216	10/06/2022 4:57PM	10/06/2022 5:27PM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
12	Savner	Quarry	Mouja- Gosewadi- A	4933110	MH40BG5038	10/06/2022 4:57PM	10/06/2022 5:27PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur

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13	Savner	Quarry	Mouja- Gosewadi- A	4739895	MH40CD5821	02/06/2022 12:42PM	02/06/2022 1:12PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
14	Savner	Quarry	Mouja- Gosewadi- A	4739831	MH40AK8056	02/06/2022 12:39PM	02/06/2022 1:09PM	Sand	3	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
15	Savner	Quarry	Mouja- Gosewadi- A	4737363	MH40BG9900	02/06/2022 11:20AM	02/06/2022 11:50AM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
16	Savner	Quarry	Mouja- Gosewadi- A	4736718	MH40BG9899	02/06/2022 10:59AM	02/06/2022 11:29AM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
17	Savner	Quarry	Mouja- Gosewadi- A	4736333	MH40BG9900	02/06/2022 10:47AM	02/06/2022 11:17AM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
18	Savner	Quarry	Mouja- Gosewadi- A	4735409	MH40BG9899	02/06/2022 10:19AM	02/06/2022 10:49AM	Sand	2	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
19	Savner	Quarry	Mouja- Gosewadi- A	4716900	MH40BG9899	01/06/2022 11:33AM	01/06/2022 12:03PM	Sand	1	15	Gat No-52/1, Mauja-Ranala, Savner, Nagpur
Total Brass-									**7185**		

Distt. Mining Officer
Nagpur.

Revenue Department
Government of Maharashtra

mahakhanij

eTP Report

State: Maharashtra, Division: Nagpur
District: Nagpur, Taluka: Savner
From Date: 01/05/2022 To Date: 10/06/2022
Plot Type: Quarry, Plot: Mouja- Gosewadi- A

Print Date: 4/7/2022, 1:50:07 pm

Brass Km

Sr No.	Taluka	Plot Type	Plot Name	eTP No.	VehicleNo.	Validity From	Validity Upto	Mineral	Quantity	Distanc	Destination
1	Savner	Quarry	Mouja- Gosewadi- A	4934254	MH40CD7004	10/06/2022 5:47PM	11/06/2022 6:02AM	Sand	3	366	Buldana (M Cl), Buldhana
2	Savner	Quarry	Mouja- Gosewadi- A	4934210	MH40CD4552	10/06/2022 5:45PM	11/06/2022 6:00AM	Sand	2	366	Buldana (M Cl), Buldhana
3	Savner	Quarry	Mouja- Gosewadi- A	4934174	MH40CD5076	10/06/2022 5:44PM	11/06/2022 5:59AM	Sand	2	366	Buldana (M Cl), Buldhana
4	Savner	Quarry	Mouja- Gosewadi- A	4931126	MH40BL5595	10/06/2022 3:43PM	11/06/2022 4:13AM	Sand	3	375	Nagapur, Nanded, Nanded
5	Savner	Quarry	Mouja- Gosewadi- A	4929657	MH40BL3550	10/06/2022 2:56PM	10/06/2022 6:11PM	Sand	3	34	Nagpur (M Corp.), Nagpur
6	Savner	Quarry	Mouja- Gosewadi- A	4921531	MH40CD4050	10/06/2022 9:51AM	10/06/2022 1:06PM	Sand	3	34	Nagpur (M Corp.), Nagpur
7	Savner	Quarry	Mouja- Gosewadi- A	4921127	MH40CD5903	10/06/2022 9:40AM	11/06/2022 12:10AM	Sand	3	432	Jalna (M Cl), Jalna
8	Savner	Quarry	Mouja- Gosewadi- A	4917900	MH40BG7127	10/06/2022 7:51AM	10/06/2022 8:21PM	Sand	3	370	Nanded Waghala (M Corp.), Nanded
9	Savner	Quarry	Mouja- Gosewadi- A	4917681	MH36F2360	10/06/2022 7:39AM	10/06/2022 10:54AM	Sand	3	34	Nagpur (M Corp.), Nagpur
10	Savner	Quarry	Mouja- Gosewadi- A	4917175	MH40BL6977	10/06/2022 7:04AM	10/06/2022 7:19PM	Sand	3	366	Buldana (M Cl), Buldhana

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1948	Savner	Quarry	Mouja- Gosewadi- A	4816054	MH40BL6977	06/06/2022 6:04AM	06/06/2022 4:19PM	Sand	3	304	Washim (M Cl), Washim
1949	Savner	Quarry	Mouja- Gosewadi- A	4813133	MH40BG7127	05/06/2022 5:50PM	05/06/2022 11:35PM	Sand	3	171	Amravati (M Corp.),
1950	Savner	Quarry	Mouja- Gosewadi- A	4813078	MH31FC5345	05/06/2022 5:46PM	06/06/2022 6:01AM	Sand	3	366	Buldana (M Cl), Buldhana
1951	Savner	Quarry	Mouja- Gosewadi- A	4808094	MH40Y1324	05/06/2022 1:20PM	05/06/2022 4:35PM	Sand	3	34	Nagpur (M Corp.), Nagpur
1952	Savner	Quarry	Mouja- Gosewadi- A	4808010	MH40AK7866	05/06/2022 1:15PM	05/06/2022 4:30PM	Sand	3	34	Nagpur (M Corp.), Nagpur
1953	Savner	Quarry	Mouja- Gosewadi- A	4805742	MH40BG7127	05/06/2022 11:42AM	05/06/2022 5:27PM	Sand	3	171	Amravati (M Corp.),
1954	Savner	Quarry	Mouja- Gosewadi- A	4798371	MH40CD5903	05/06/2022 7:09AM	05/06/2022 9:39PM	Sand	2	432	Jalna (M Cl), Jalna
1955	Savner	Quarry	Mouja- Gosewadi- A	4798233	MH40BL6977	05/06/2022 7:00AM	05/06/2022 5:15PM	Sand	3	303	Washim, Washim
1956	Savner	Quarry	Mouja- Gosewadi- A	4793977	MH40CD5903	04/06/2022 5:58PM	05/06/2022 1:28AM	Sand	3	224	Darwha (M Cl), Yavatmal
1957	Savner	Quarry	Mouja- Gosewadi- A	4792428	MH40Y1905	04/06/2022 4:51PM	05/06/2022 5:06AM	Sand	3	366	Buldana (M Cl), Buldhana
1976	Savner	Quarry	Mouja- Gosewadi- A	4788637	MH40Y1035	04/06/2022 2:30PM	04/06/2022 5:45PM	Sand	3	34	Nagpur (M Corp.), Nagpur
2006	Savner	Quarry	Mouja- Gosewadi- A	4785656	MH40BG7127	04/06/2022 12:24PM	04/06/2022 6:24PM	Sand	3	180	Yavatmal (M Cl), Yavatmal
2022	Savner	Quarry	Mouja- Gosewadi- A	4784840	MH40CD5903	04/06/2022 11:57AM	04/06/2022 5:57PM	Sand	3	180	Yavatmal (M Cl), Yavatmal
2165	Savner	Quarry	Mouja- Gosewadi- A	4776030	MH40BL6977	04/06/2022 7:24AM	04/06/2022 5:39PM	Sand	3	304	Washim (M Cl), Washim
2186	Savner	Quarry	Mouja- Gosewadi- A	4770177	MH40BG7127	03/06/2022 5:18PM	03/06/2022 11:03PM	Sand	3	171	Amravati (M Corp.),
2223	Savner	Quarry	Mouja- Gosewadi- A	4768121	MH36F2360	03/06/2022 3:59PM	03/06/2022 5:14PM	Sand	3	34	Ranala, Kamptee, Nagpur
2295	Savner	Quarry	Mouja- Gosewadi- A	4763760	MH40Y1905	03/06/2022 1:07PM	04/06/2022 1:22AM	Sand	3	366	Buldana (M Cl), Buldhana
2308	Savner	Quarry	Mouja- Gosewadi- A	4762223	MH40BG7127	03/06/2022 12:12PM	03/06/2022 3:57PM	Sand	3	110	Wardha (M Cl), Wardha
2400	Savner	Quarry	Mouja- Gosewadi- A	4752113	MH40CD5903	03/06/2022 6:53AM	03/06/2022 4:38PM	Sand	3	292	Umarkhed (M Cl), Yavatmal
2401	Savner	Quarry	Mouja- Gosewadi- A	4751998	MH40BL6977	03/06/2022 6:45AM	03/06/2022 5:00PM	Sand	3	304	Washim (M Cl), Washim
2413	Savner	Quarry	Mouja- Gosewadi- A	4747074	MH40Y1905	02/06/2022 5:14PM	02/06/2022 11:14PM	Sand	3	180	Yavatmal (M Cl), Yavatmal
2468	Savner	Quarry	Mouja- Gosewadi- A	4741727	MH40BG4359	02/06/2022 2:05PM	02/06/2022 5:50PM	Sand	3	110	Wardha (M Cl), Wardha
2488	Savner	Quarry	Mouja- Gosewadi- A	4701229	MH40BG9899	31/05/2022 3:48PM	31/05/2022 5:03PM	Sand	1	33	Kalameshwar (M Cl), Nagpur
Total Brass									**235**		

Distt. Mining Officer
Nagpur.

महाराष्ट्र शासन

तहसिलदार सावनेर यांचे कार्यालय,
प्रशासकीय इमारत तळमजला, छिंदवाडा रोड, तहसिल सावनेर ४४११०७
दुरध्वनी क्रमांक ०७११३-२३२२१२ ईमेल आयडी :-
tahsaoner@gmail.com

क.अ.का/प्रस्तू-१/तहसाव/कावि /२०२२ दिनांक 01/७/२०२२

1069

प्रति,

जिल्हा खनिकर्म अधिकारी
नागपूर

विषय – गोसवाडी अ तहसिल सावनेर या मंजूर करण्यात आलेल्या रेतीघाटाचे उखनन व या लगत असलेल्या रेतीसाठाबाबत व पर्यावरण पुरक उत्खनन झाल्याबाबत

संदर्भ – मंडळ अधिकारी सावनेर यांचे प्रतिवेदन दिनांक ३०.६.२०२२

रेती/वाळूघाट लिलाव सन २०२१-२०२२ अंतर्गत आपले कार्यालयाचे पत्र क्रमांक खनि-२/कक्ष-२१/कावि ३१९/२०२२ दिनांक १९.५.२०२२ अन्वये मे.आस्था असोशिएटस तर्फे श्री आयुष अजयजी त्रिवेदी हनुमान नगर हनुमान मंदिर कन्हान त. पारशिवनी जि.नागपूर यांना सावनेर तालुका अंतर्गत मौजा गोसेवाडी- अ हा रेतीघाट ई.लिलावाने सवोच्च् बोली असल्यामुळे मंजूर करण्यात आलेला आहे.त्यानुसार सदर संस्थेच विहीत प्रकिया पुर्ण करुन उक्त घाटाचा दिनांक २७.५.२०२२ ला ताबा दिलेला आहे.

तद्नंतर शासनाचे वाळू/रेती निर्गती बाबत सुधारित घोरण दिनांक २८.१.२०२२ मधिल दिनांक १० जून ते ३० सप्टेंबर या कालावधीत उत्खन्न करता येणार नाही तसेच वाहतुक करता येणार नसल्यामुळे संबधीत घाटधारकांना या कार्यालयाचे पत्र दिनांक १०.६.२०२२ कळविण्यात आले होते.

१) मंडळ अधिकारी पाटनसावंगी व त्यांचे पथकाने यांनी दिनांक ३०.६.२०२२ रोजी उक्त् घाटाचे स्थळ निरिक्षण केले असता गोसेवाडी- अ या रेतीघाटामध्ये पोकलॅन मशिनची चाकोली दिसून आली तसेच संबधीत रेतीघाटधारक यांनी मंजूर करण्यात आलेल्या क्षेत्रातून नदीपात्रापासुन ७.५ अंतर न सोडता उत्खन्न केले आहे.तसेच मंजूर करण्यात आलेल्या रेतीघाटाचे सिमांकनाबाहेर ४५ मिटर मध्ये अवैध रेतीचे खोंदकाम केलेले असल्याचे आढळून आले त्याच प्रमाणे या ठिकाणी क्लस्टर झोन नुसार गौसवाडी अ व ब हे रेतीधाट असून या दोन्ही घाटाच्या मधील १०० मिटरX३५ मिटर X२ मिटर खोली मध्ये अवैध रेतीचे उत्खन्न केल्याचे दिसून आले आहे. असे नमुद केले आहे.

त्यानुसार उक्त् बाबीचा विचार करता गोसवाडी "अ" या रेतीघाटघारक सिमांकन केलेल्या क्षेत्रातून फक्त् ७४२० ब्रास रेतीसाठाचे उत्खन्न करणे मंजूरी प्राप्त् असतांना त्यापेक्षा इतर क्षेत्रात अवैध उत्खन्न केले असल्याचे सकृतदर्शनी दिसून येत आहे. त्यानुसार अवैध खोदकामाबाबत तांत्रिकदृष्टया मोजमाप करणे

आवश्यक आहे.याबाबत तालुकास्तरीय सनियंत्रण समितीचे सदस्य (भुविज्ञान व खनिकर्म संचालनालय नागपूर तसेच भुजल सर्व्हेक्षण व विकास यंत्रणा नागपूर या विभामार्फत् प्राधिकृत प्रतिनिधी)कनिष्ट भुवैज्ञानिक यांचेमार्फत् सर्वेक्षण/मोजमाप करुन सविस्तर अहवाल मांगविण्यात आलेला आहे.

२) गोसवाडी अ रेतीघाटालगत सन २०१९-२०२० या कालावधीत मे. इंडीयन ट्रेडर्स तर्फे श्री अफरोज रशीद खान रा. पारशिवनी यांचा मौजा गोसवाडी येथील सर्व्हे क्रमांक २५६ मध्ये एकुण ७०७ ब्रास रेतीसाठा जप्त करुन तो सुर्पदनामावर श्री अफरोज रशिद खान यांना ताब्यात देण्यात आलेला होता. याच वैध रेतीसाठालगत आज अंदाजे २८०० ब्रास रेतीसाठा जमा करण्यात आलेला आहे. उक्त् सर्व्हे क्रमाकामध्ये आज एकुण अंदाजे ३५०० ब्रास रेतीसाठा आढळून आलेला आहे. तो जप्त करण्यात आलेला असून याबाबत संबधीत जूना रेतीसाठा अफरोज रशिद खान यांना व सद्यास्थितीत असलेल्या रेतीघाटधारक यांना कारणे दाखवा नोटीस बजावण्यात आले असून लेखी उत्तर प्राप्त् होताच पुढिल कार्यवाही करण्यासाठी तालुका सनियंत्रण समितीमार्फत् तांत्रिकदृष्टया मोजमाप करुन अंतिम कार्यवाही करण्यात येवून तसा अहवाल सादर करण्यात येईल.

सबब माहीतीकरीता

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तहसिलदार सावनेर

प्रत- मा. उपविभागीय अधिकारी सावनेर यांना माहीतीकरीता सविनय सादर

तहसिलदार सावनेर

तहसिलदार सावनेर

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), Maharashtra)

To,

The District Mining Officer
OFFICE OF DISTRICT COLLECTOR,NAGPUR
Ravindra Nath Tagore Marg, Civil Lines, Nagpur -440001

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/MH/MIN/253402/2022 dated 13 Feb 2022. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22B001MH140542**
2.	**File No.**	SIA/MH/MIN/253402/2022
3.	**Project Type**	New
4.	**Category**	B2
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Environment Clearance of Saholi A Sand Mine (M L Area 2.50 ha) on Kanhan River at Survey No 15,16,17,18,19 Village Saholi A, Taluka Parseoni, District Nagpur
7.	**Name of Company/Organization**	OFFICE OF DISTRICT COLLECTOR,NAGPUR
8.	**Location of Project**	Maharashtra
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 11/05/2022

(e-signed)
Manisha Patankar Mhaiskar
Member Secretary
SEIAA - (Maharashtra)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. SIA/MH/MIN/253402/2022
Environment & Climate
Change Department
Room No. 217, 2nd Floor,
Mantralaya, Mumbai- 400032.

To
District Mining Officer,
Nagpur

Subject: Environmental clearance for Proposed sand ghat at Gut No. 15, 16, 17, 18 & 19 (Part), Area in 2.5 Ha, at, Village Saholi-A, Tehsil Parseoni, District- Nagpur, by District Mining Officer Nagpur.
Reference: SIA/MH/MIN/253402/2022

This has reference to your communication on the above mentioned subject. The proposal was considered by the SEAC-1 in its 220th meeting of held on 11th to 13th April, 2022 under screening category 1 (a) B2 as per EIA Notification, 2006 and recommended to SEIAA. Proposal then considered in 242nd meeting (Day-4) of State Level Environment Impact Assessment Authority (SEIAA) held on 04th May, 2022.

2. Brief Information of the project submitted by you is as below:-

Village Name	Sand Mining Quantity in brass	Name of River	Total area in Ha.	Area dimensions Length x Breadth x Depth in meters	EMP Cost in Rs. Lakhs	Plantation along the approach road (number of trees)	Plantation along the river bank (number of trees)	Date of Public Hearing	Budget proposed for compliance of issues raised in Public Hearing in Rs. Lakhs
Saholi-A	7067	Kanhan	2.50	500 x 50 x 0.8	7.88	570	225	21.01.2022	--

3. The proposal has been considered by SEIAA in its 242nd meeting and decided to accord Environment Clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implantation of following terms and conditions-

Specific Conditions:

A. SEAC Conditions-

1. DMO to demarcate the proposed sand ghat with geo-referencing clearly providing adequate space for necessary infrastructure and facilities as presented in the layout.
2. The District Collector shall ensure that, the final lease be granted only after ensuring the river bed is dry. No sand mining activity be carried out if there is water in the river bed.
3. The District Collector shall ensure that, the approach road from the proposed sand ghat to the sand storage depot is properly identified and demarcated with the consent of the concern land owners before issuing final lease document.

4. PP to monitor the groundwater level during sand quarrying operations, a network of existing wells may be established around the sand quarrying area and piezometers shall be installed at all sand quarry sites. Monitoring of Groundwater Quality in the vicinity (one kilometre radius from the sand quarrying site) shall be carried out once in two months
5. PP to ensure that, suitable depots shall be located in the vicinity of the sand quarry site to facilitate the sale of sand. While selecting the site for depots, it must be ensured that the site is within 25 km from the sand quarry site and has an area of around 10-15 Acres with parking facility and proper entry and exit for smooth movement of the vehicles. The depot site shall preferably be a Government land, foreshore area of tank bund etc. near an NH/SH/MDR/ODR. In the absence of any Government land in the vicinity, private land may be leased out and rent fixed as per the approved Government rates applicable there in.
6. PP to identify the central 3/4th part of river on map where there is a deposition of sand and remaining 1/4th area needs to be kept as no mining zone for the protection of the bank.
7. PP to install permanent boundary pillars at the identified area of the aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundaries on each side of the bank shall not be more than 100 meters.
8. PP to ensure that no mining activity is carried out below the depth as approved by the Competent Authority.
9. PP to make sure that the Environmental Management Plan as presented shall be included in the lease agreement to be signed with the lease holder and ensure its implementation.
10. Any unspent budget for EMP and CER will be transferred to District Mining Fund and will be used for CER/Plantation activities in consultation with District Collector.
11. PP to ensure that, the distance of mining activity area from the river bank shall be 1/4th of the river bed width and should not be less than 7.5 meters.
12. PP to ensure that, sand shall not be extracted up to a distance of 1 km from bridges and highways on both sides, or five times (5x) of the span (x) of bridge, public civil structure (including water intake point) on upstream side and ten times (10 x) the span of such bridge on downstream side, subjected to a minimum of 250 meters on the upstream and 500 meters on the downstream side.
13. The District Collector shall define the transportation route from the mining lease considering the maximum production from the mines, size of mining lease, their location, the quantity of mineral that can be mined safely etc considering the movement of trucks/ tippers/tractors for the villages having habitation shall be avoided.
14. PP to ensure following additional measures are to be provided by the leaseholder to prevent any vehicle from transporting sand out of the lease area bypassing the IT enabled system,

    A. To provide one entry and exit point for vehicles. In case it is necessary to have more than one entry/exit all such points have check points all digital monitoring facilities as mentioned in the Enforcement and Monitoring Guidelines issued by MoEF&CC in January 2020. All other possible ways of entry /exit shall be closed using barriers. All provisions shall be made to not make it possible for any vehicle to enter or exit without entry into the computerized system.

    B. All such point shall have 24x7 CCTV coverage, the footage of which shall be submitted to the District Collector by the lease holder at mutually agreed frequencies
15. The route of mineral transportation vehicle from source to destination shall be tracked through the system using checkpoints, Radio-frequency identification (RFID) tags, and GPS tracking
16. PP shall carry out sand mining by manual method only. No mechanical /electrical/power driven devices shall be used for sand mining purpose
17. PP to ensure no stream is diverted due to proposed sand mining activity

18. PP to ensure that mining/ loading activity shall be restricted to day hours' time only. No mining activity shall be carried out after sunset and before sun rise
19. PP to ensure that, no heavy vehicles like truck, dumper etc. should ply in the river bed.
20. PP to ensure that, there is no damage to any fauna and its nesting close to the sand mining if any
21. PP to ensure that adequate measures like maintenance of roads, sprinkling of water and plantation is carried out to reduce the dust particulate matter pollution
22. PP to provide movable bio toilets to the workers working in the area and the sewage generated shall be properly collected and treated so as to confirm to the standards prescribed by MoEF&CC and CPCB
23. PP to ensure that parking shall be done at designated place only and shall not be on Public roads or in the river bed
24. The sand transportation shall be carried out through the covered vehicles only and the vehicles carrying the mineral shall not be overloaded
25. PP to provide PP kits to all workers and First Aid facility at the proposed mining site. PP to impart safety induction training to all workers, impart daily safety briefing to workers, and carry out safety mock drill at least once a month
26. PP to provide gabion structures of random rubble masonry (no wire mesh to be used) at 200 m interval, if length of sand ghat more than 200 m., as per Sand Mining Guidelines of IBM vide letter 296/7/2000/MRC dated 16 May 2011.
27. The District Collector to ensure strict compliance of all conditions stipulated in the Environmental Clearance. The District Collector should strictly monitor the compliance of the conditions stipulated in the Environment Clearance letter. Gram Dakshata Samiti to ensure that sand mining is limited to stipulated depth and quantity.
28. PP to ensure strict compliance of Enforcement & Monitoring Guidelines published by the MoEF&CC in January 2020
29. PP to adhere to the provisions stipulated in the Sustainable Sand Mining Guidelines issued by MoEF&CC, Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013 and Sand Extraction Policy issued by Maharashtra Government in Revenue and Forest Department
30. The District Collector and District Mining Officer shall ensure that there is no violation of any order with respect to the sand mining activity passed by the Competent Court. (Particularly, the directions given by Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP (C) Nos. 19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No. 171/2013 & 173/2018 be strictly followed.
31. PP to submit details of green development in the district for the sand ghats to which Environmental Clearance was issued last year.
32. PP to ensure that, the transportation route of mined material shall not pass through the village it should be bypassed so as to avoid road damages, unforeseen accidents and adverse impact on the villagers.
33. PP to obtain necessary NOC from the forest department if the transportation route is passing through the forest area.
34. PP to submit implementable plan to avoid erosion during sand mining due to concave nature of the sand ghat if any.

B. <u>SEIAA Conditions-</u>

1. DMO to adhere to the conditions stipulated by SEAC-1.
2. District Collector to personally monitor/ ensure strict compliance of the condition no 6,8,10,11,15,16,18,19 and 23 mentioned in SEAC MoM.

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I. District Collector and District Mining Officer to ensure the directions given by Hon'ble National Green Tribunal, Pune in Appeal No 10/2013 (WZ) dated 1st October 2013 as bellow- However, we direct that when further auctioning process is required to be conducted, ordinarily, the sand beds falling between the sand beds which are now already auctioned shall be avoided unless there is special certification issued by the competent authority which would indicate absence of any environmental damage, having regard to precautionary principle which is required to be adopted. We mean to say, it should not happen that presently the sand beds are auctioned by keeping distance of 1 k.m. from each other and gap is filled up subsequently under one or another pretext.

II. Distance between lease area to be marked as per actual shape and size, on Village Map or authenticated map available with Revenue Authority and ensure provisions regarding distance between two lease area and total lease area in the OM dated 24th December 2013 issued by MoEF.

III. The validity of EC to the above mentioned sand block satisfying stipulated conditions is up to 30th September, 2022.

IV. District Collector and District Mining Officer to ensure the directions given by Hon'ble National Green Tribunal, Pune in application no 44/2014 (Paramjeet Singh kalsi Vs MoEF&CC & Others) dated 19.10.2015 as below-

i) After the grant of 'Environment Clearance' to District Mining Officer, and once the Lessee or Transferee or actual person who is going to execute the mining activity or sand exploration, is decided, 'Environment Clearance' shall be transferred in the latter's name as per procedure in Clause No. 11 of the EC Notification.

ii) District Mining Officer will forward the proposal to SEIAA for transfer of Environment Clearance to Lessee or Transferee.

iii) The concerned Tahsildar of that area will be the Authority for conducting periodic inspections, site visits and attending to complaints of violation etc. Tahsildar will visit the site to verify whether the concerned Lessee or Transferee, after transfer of Environment clearance on their name, have followed the conditions stipulated in the Environment clearance.

iv) In respect of cases of violation of conditions of Environment clearance, the Tahsildar will submit his report to the District Collector and District Collector will send the report to SEIAA with his/her observations.

V. Project proponent to follow the standard environmental conditions for sand mining of sustainable sand mining management guidelines 2016, issued by MoEF & CC.

VI. Project proponent to ensure the strictly implementation of Environment management plan.

VII. District Collector to ensure that conditions stipulated in the Government Resolution (G.R.) dated 31.01.2018 issued by Revenue and Forest Department, Government of Maharashtra (GoM) is implemented in letter and spirit.

VIII. Sand excavation is allowed only for the Reti Guts having sand deposition more than 2 m and excavation should be for layers above 2 m of sand deposit as recommended by GSDA.

IX. The instructions of MoEF & CC in the Sustainable sand mining guidelines 2016 [regarding sand mining approval and tracking system and transport of excavated sand] should be followed.

X. District Collector to ensure that every receipt given is serially scanned and registration number so generated must be written on such receipt to avoid duplication and unauthorized transportation of the sand.

XI. Project Proponent to ensure that vehicles transporting sand should not be overloaded beyond stated capacity.

XII. The District collector should ensure that mining will be done strictly up to the depth recommended by GSDA.

XIII. The green belt development /tree plantation will be made either on river bank or along road side.

XIV. Measures for prevention & control of soil erosion and management of silt shall be undertaken.

XV. Project Proponent to ensure that there is no violation of the Supreme Court order and orders of the National Green Tribunal given in the related matters.

XVI. Project Proponent & District Mining Officer will be held individually responsible for non-compliance of the conditions stipulated in the Environmental clearance and shall be liable for legal action under Environment (Protection) Act of 1986.

XVII. Transport of sand should be through vehicle which is properly covered with Tarpaulin and it should not be overloaded.

XVIII. Project Proponent to ensure that the mining plan is approved by Director of Geology and Mining comprising study to show that annual replenishment of sand in the mining lease area is sufficient to sustain the mining operations at levels prescribed in the mining plan and that the transport infrastructure is adequate to transport the mined material.

XIX. Provisions stipulated in Maharashtra Minor Minerals Extraction (development and Regulation) Rules 2013 and Government Resolution of Revenue and Forest Department dated 03.01.2018 shall be strictly fallowed by Project proponent.

XX. The depth of sand layer to be mined, after retaining 2 m minimum layer below, should not be more than 2 meters as per Government Resolution of Revenue Department dated 03.01.2018 e.g. if the total depth of sand is 3 m, only up to one meter of sand shall be mined.

XXI. Project Proponent or District Collector will take bank guarantee up to 2% of the total auction cost for the given auction period from the Lessee to ensure the compliance of the conditions stipulated. In case of violation of stipulated conditions by the Lessee, bank guarantee so obtained shall be forfeited and legal action under the law should initiated against such Lessee.

XXII. The distance 3 m or 10 % of the width of river whichever is more will be kept intact as a no mining zone.

XXIII. No cutting of the trees shall be done while excavating the sand or while constructing the access road to sand ghat.

XXIV. All mining shall be carried out manually.

XXV. Underwater mining shall not be permitted without the specific expert sanction of the State Government only for prevention of flood and increasing the capacity of reservoir if any.

XXVI. It shall be ensured that excavation of minor mineral does not disturb or change the underlying soil characteristics of the river bed /basin, where mining is carried out.

XXVII. It shall be ensured that mining does not in any way disturb the turbidity, velocity and flow pattern of the river water.

XXVIII. It shall be ensured that there is no fauna dependent on the river bed or areas close to mining for its nesting is disturbed.

XXIX. Turtle nesting units conservation is very important. Therefore sand mining in such areas is to be prohibited.

XXX. Precise mining area will be jointly demarcated at site by officials of Mining/Revenue department prior to mining operations for all proposals under consideration. Such site plan, duly verified by competent authority shall be submitted to Environment Department.

XXXI. All necessary statutory clearances shall be obtained before start of mining operations.

XXXII. No mining shall be carried out in the live streams.

XXXIII. Mining shall be limited to day hours time only.

XXXIV. No mining shall be carried out in the safety zone of any bridge and/or embankment.

XXXV. No mining shall be carried out in the vicinity of natural/ manmade archaeological sites.

XXXVI. The lease holder shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and groundwater), if required for the project.

XXXVII. Waste water, if any, shall be properly collected and treated so as to conform to the standards prescribed by MoEF/CPCB.

XXXVIII. No wildlife habitat will be infringed.

XXXIX. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, if applicable to this project.

XL. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/Horticulture Officer.

XLI. Parking of vehicles should not be made on public places.

XLII. Transportation of materials shall be done by covering the trucks / tractors with tarpaulin or other suitable mechanism so that no spillage of mineral/dust takes place.

XLIII. It shall be ensured that there is no leakage of oil and grease from the vehicles used for transportation.

XLIV. Special Measures shall be adopted to prevent the nearby settlements from the impacts of mining activities. Maintenance of roads through which transportation of minor minerals is to be undertaken, shall be carried out regularly.

XLV. Provision for first-aid, medical health care safe drinking water, and sanitation etc. shall be provided at site.

XLVI. Ambient air quality will be monitored at the site and the nearest habitation regularly. Ambient air quality at the boundary of the precise mining area shall conform to the norms prescribed by MoEF & CC, GOI.

XLVII. Measures shall be taken for control of noise level to the limits prescribed by CPCB.

XLVIII. Any change in mining area, khasra /Gat numbers, entailing capacity addition with change in process and or mining technology, modernization and scope of working shall again require prior Environmental Clearance as per provisions of EIA Notification, 2006 (as amended).

XLIX. SEAC appraised the proposals on the basis of information submitted by concerned District Mining Officer. Mining Officer shall submit the list of blocks satisfying conditions stipulated above to Revenue & Environment dept. The list of blocks and conditions stipulated above shall be made available in public domain.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under

EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

9. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Manisha Patankar Mahishkar
(Member Secretary, SEIAA) 9/5/2022

Copy to:

1. Chairman, SEIAA (Maharashtra), Mumbai.
2. Secretary, MoEF & CC, IA- Division MOEF & CC
3. Member Secretary, Maharashtra Pollution Control Board, Mumbai.
4. Regional Office MoEF & CC, Nagpur
5. District Collector, Nagpur
6. Regional Officer, Maharashtra Pollution Control Board, Nagpur

950

Saholi Reti Ghat (B) – Buffer Zone not demarketed at Distance of 10 % of width of River.

Saholi Reti Ghat (B) – Sand Mining was carried out.

Saholi Reti Ghat (B) – Approach Road of Sand Ghat.

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), Maharashtra)

To,

The District Mining Officer
OFFICE OF DISTRICT COLLECTOR,NAGPUR
Ravindra Nath Tagore Marg, Civil Lines, Nagpur -440001

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/MH/MIN/253409/2022 dated 13 Feb 2022. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC22B001MH197480**
2.	**File No.**	SIA/MH/MIN/253409/2022
3.	**Project Type**	New
4.	**Category**	B2
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Environment Clearance for Saholi B Sand Ghat (M L Area 3.60 ha) on Kanhan River at Survey No 115/2, 112/2, 136/2, 141/2 Village Saholi B, Taluka Parseoni, District Nagpur
7.	**Name of Company/Organization**	OFFICE OF DISTRICT COLLECTOR,NAGPUR
8.	**Location of Project**	Maharashtra
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 11/05/2022

(e-signed)
Manisha Patankar Mhaiskar
Member Secretary
SEIAA - (Maharashtra)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. SIA/MH/MIN/253409/2022
Environment & Climate
Change Department
Room No. 217, 2nd Floor,
Mantralaya, Mumbai- 400032.

To
District Mining Officer,
Nagpur

Subject: Environmental clearance for Proposed sand ghat at Gut No.115/2, 112/2, 136/2, 141/2, Area in 3.6 Ha, at, Village Saholi-B, Tehsil Parseoni, District- Nagpur, by District Mining Officer Nagpur
Reference: SIA/MH/MIN/253409/2022

This has reference to your communication on the above mentioned subject. The proposal was considered by the SEAC-1 in its 220th meeting of held on 11th to 13th April, 2022 under screening category 1 (a) B2 as per EIA Notification, 2006 and recommended to SEIAA. Proposal then considered in 242nd meeting (Day-4) of State Level Environment Impact Assessment Authority (SEIAA) held on 04th May, 2022.

2. Brief Information of the project submitted by you is as below:-

Village Name	Sand Mining Quantity in brass	Name of River	Total area in Ha.	Area dimensions Length x Breadth x Depth in meters	EMP Cost in Rs. Lakhs	Plantation along the approach road (number of trees)	Plantation along the river bank (number of trees)	Date of Public Hearing	Budget proposed for compliance of issues raised in Public Hearing in Rs. Lakhs
Saholi B	12720	Kanhan	3.60	600 x 60 x 1.0	7.65	463	300	21.01.2022	--

3. The proposal has been considered by SEIAA in its 242nd meeting and decided to accord Environment Clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implantation of following terms and conditions-

Specific Conditions:

A. SEAC Conditions-

1. DMO to demarcate the proposed sand ghat with geo-referencing clearly providing adequate space for necessary infrastructure and facilities as presented in the layout.
2. The District Collector shall ensure that, the final lease be granted only after ensuring the river bed is dry. No sand mining activity be carried out if there is water in the river bed.
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XVI. Project Proponent & District Mining Officer will be held individually responsible for non-compliance of the conditions stipulated in the Environmental clearance and shall be liable for legal action under Environment (Protection) Act of 1986.

XVII. Transport of sand should be through vehicle which is properly covered with Tarpaulin and it should not be overloaded.

XVIII. Project Proponent to ensure that the mining plan is approved by Director of Geology and Mining comprising study to show that annual replenishment of sand in the mining lease area is sufficient to sustain the mining operations at levels prescribed in the mining plan and that the transport infrastructure is adequate to transport the mined material.

XIX. Provisions stipulated in Maharashtra Minor Minerals Extraction (development and Regulation) Rules 2013 and Government Resolution of Revenue and Forest Department dated 03.01.2018 shall be strictly fallowed by Project proponent.

XX. The depth of sand layer to be mined, after retaining 2 m minimum layer below, should not be more than 2 meters as per Government Resolution of Revenue Department dated 03.01.2018 e.g. if the total depth of sand is 3 m, only up to one meter of sand shall be mined.

XXI. Project Proponent or District Collector will take bank guarantee up to 2% of the total auction cost for the given auction period from the Lessee to ensure the compliance of the conditions stipulated. In case of violation of stipulated conditions by the Lessee, bank guarantee so obtained shall be forfeited and legal action under the law should initiated against such Lessee.

XXII. The distance 3 m or 10 % of the width of river whichever is more will be kept intact as a no mining zone.

XXIII. No cutting of the trees shall be done while excavating the sand or while constructing the access road to sand ghat.

XXIV. All mining shall be carried out manually.

XXV. Underwater mining shall not be permitted without the specific expert sanction of the State Government only for prevention of flood and increasing the capacity of reservoir if any.

XXVI. It shall be ensured that excavation of minor mineral does not disturb or change the underlying soil characteristics of the river bed /basin, where mining is carried out.

XXVII. It shall be ensured that mining does not in any way disturb the turbidity, velocity and flow pattern of the river water.

XXVIII. It shall be ensured that there is no fauna dependent on the river bed or areas close to mining for its nesting is disturbed.

XXIX. Turtle nesting units conservation is very important. Therefore sand mining in such areas is to be prohibited.

XXX. Precise mining area will be jointly demarcated at site by officials of Mining/Revenue department prior to mining operations for all proposals under consideration. Such site plan, duly verified by competent authority shall be submitted to Environment Department.

XXXI. All necessary statutory clearances shall be obtained before start of mining operations.

XXXII. No mining shall be carried out in the live streams.

XXXIII. Mining shall be limited to day hours time only.

XXXIV. No mining shall be carried out in the safety zone of any bridge and/or embankment.

XXXV. No mining shall be carried out in the vicinity of natural/ manmade archaeological sites.

XXXVI. The lease holder shall obtain necessary prior permission of the competent authorities for drawal of requisite quantity of water (surface water and groundwater), if required for the project.

XXXVII. Waste water, if any, shall be properly collected and treated so as to conform to the standards prescribed by MoEF/CPCB.

XXXVIII. No wildlife habitat will be infringed.

XXXIX. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, if applicable to this project.

XL. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/Horticulture Officer.

XLI. Parking of vehicles should not be made on public places.

XLII. Transportation of materials shall be done by covering the trucks / tractors with tarpaulin or other suitable mechanism so that no spillage of mineral/dust takes place.

XLIII. It shall be ensured that there is no leakage of oil and grease from the vehicles used for transportation.

XLIV. Special Measures shall be adopted to prevent the nearby settlements from the impacts of mining activities. Maintenance of roads through which transportation of minor minerals is to be undertaken, shall be carried out regularly.

XLV. Provision for first-aid, medical health care safe drinking water, and sanitation etc. shall be provided at site.

XLVI. Ambient air quality will be monitored at the site and the nearest habitation regularly. Ambient air quality at the boundary of the precise mining area shall conform to the norms prescribed by MoEF & CC, GOI.

XLVII. Measures shall be taken for control of noise level to the limits prescribed by CPCB.

XLVIII. Any change in mining area, khasra /Gat numbers, entailing capacity addition with change in process and or mining technology, modernization and scope of working shall again require prior Environmental Clearance as per provisions of EIA Notification, 2006 (as amended).

XLIX. SEAC appraised the proposals on the basis of information submitted by concerned District Mining Officer. Mining Officer shall submit the list of blocks satisfying conditions stipulated above to Revenue & Environment dept. The list of blocks and conditions stipulated above shall be made available in public domain.

4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under

EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

7. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

9. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Manisha Patankar Mhaiskar
(Member Secretary, SEIAA) 9/5/2022

Copy to:

1. Chairman, SEIAA (Maharashtra), Mumbai.
2. Secretary, MoEF & CC, IA- Division MOEF & CC
3. Member Secretary, Maharashtra Pollution Control Board, Mumbai.
4. Regional Office MoEF & CC, Nagpur
5. District Collector, Nagpur
6. Regional Officer, Maharashtra Pollution Control Board, Nagpur

9

महाराष्ट्र शासन

महसूल विभाग

तहसिलदार पारशिवनी ता. पारशिवनी जि. नागपूर यांचे कार्यालय.

सावनेर रोड, पारशिवनी ता. पारशिवनी जि. नागपूर - ४४११०५

Email :- tahsilparseoni81@gmail.com

फोन क्र [illegible]

क्र. म.सहा/तह.पार/जमीन/कावि-56 /2022

दिनांक 30 जून 2022

To,

District Mining Officer

Nagpur

Subject- List Of MNL -37 Case In Saholi Ghat

Sir,

With the above mention subject we are submitting the list of MNL -37 case in saholi ghat

Sr.	Date	Name Of Non- applicant	Fine imposed and recovered
1	18/11/2021	Krushna yadav	243400
2	08/02/2022	Aman Radke	121700
3	26/03/2022	Sriram Devaji Pimpalshende	121700
4	17/05/2022	Pankaj Gajanan Khapare	121700

Thaking you

Your faithfully

(Prashant Sangade)

Tahsildar Parseoni