



Seiaa mp &lt;mpseiaa@gmail.com&gt;

## Approved DSR of Chhatarpur (Revised )

1 message

Secretary <seacofmadhyapradesh@rediffmail.com>  
To: mpseiaa <mpseiaa@gmail.com>

Fri, Aug 5, 2022 at 4:20 PM

Res. Sir

Please find herewith approved DSR of Chhatarpur (Revised ) which was recommended in the SEAC 586 the meeting .

Regards,

From SEAC Secretariat

---

### 3 attachments

- 48\_kmls\_chhatarpur.zip**  
83K
- FINAL\_DSR\_SAND\_\_1\_com.pdf**  
9928K
- KHODU\_BHARU\_MINE\_LIST\_FOR\_DSR.pdf**  
178K

कार्यालय कलेक्टर (खनिज शाखा) जिला छतरपुर (मोप्र०)

क्र. 1037 / खनिज / 2022  
प्रति.

modkuchha@mp.gov.in

छतरपुर दिनांक 25/4/2022

सदस्य सचिव

SEIA/SEAC

ई-5, पर्यावरण परिसर, अरेचा कॉलोनी  
भोपाल (मोप्र०)

विषय :- जिला सर्वे रिपोर्ट के संबंध में प्राप्त सुझावों का निशाकरण करने वाक्त।

-00-

उपरोक्त विषयान्तर्गत लेख है, कि छतरपुर जिले की तैयार की गई जिला सर्वे रिपोर्ट 30 दिन के लिये जिले के पोर्टल Chhatarpur.nic.in पर दावा/आपत्ति एवं सुझाव हेतु दिनांक 12.03.2022 को रखी गई। 30 दिन के भीतर तीन आवेदन प्राप्त हुये जिनका नियमानुसार निशाकरण उत्तर्या गया।

जिला छतरपुर में गठित समिति द्वारा प्राप्त सुझावों के निशाकरण उपर्युक्त समिति द्वारा प्राप्त अनुमोदन अनुसार जिला सर्वे रिपोर्ट अग्रिम आवश्यक कार्यवाही हेतु साबर सम्प्रेषित है।

संलग्न :- जिला सर्वे रिपोर्ट

  
जिला छतरपुर (मोप्र०)

# कार्यालय कलेक्टर (खनिज शाखा) जिला छतरपुर (म0प्र0)

modgmcba@mp.gov.in

क्र. 10 उ० / खनिज / 2022  
प्रति,

छतरपुर दिनांक 25/4/2022

सदस्य सचिव

SEIAW/SEAC

ई-5, पर्यावरण परिसर, अरेरा कॉलोनी

भोपाल (म0प्र0)

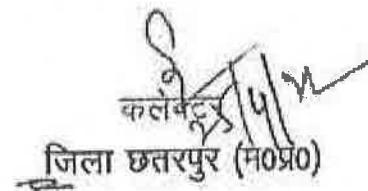
विषय :- जिला सर्वे रिपोर्ट के संबंध में प्राप्त सुझावों का निराकरण करने बाबत।

-00-

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संलग्न :- जिला सर्वे रिपोर्ट

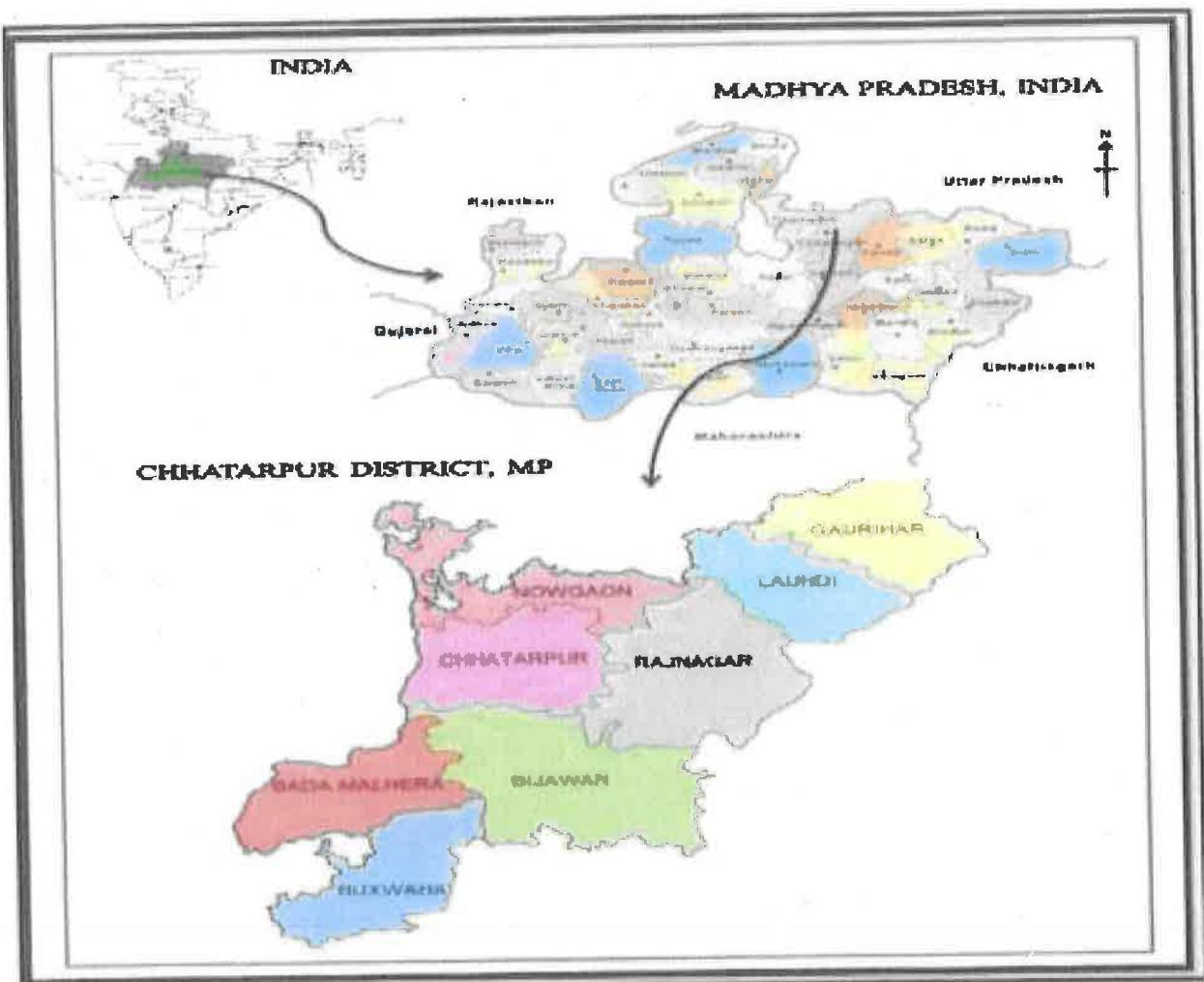
  
कलोनीपट्टा ५१८  
जिला छतरपुर (म0प्र0)

# DSR: DISTRICT SURVEY REPORT

## FOR RIVER SAND MINING

### CHHATARPUR DISTRICT

#### STATE – MADHYA PRADESH



IN PURSUANCE TO THE GAZETTE NOTIFICATION, MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (MoEF & CC), THE GOVERNMENT OF INDIA NOTIFICATION Dated,  
25 July 2018.

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 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPAO)  
 Paryavaran Parisar  
 E-5, Arera Colony, Bhopal (M.P.)

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 Assessment Authority, M.P.  
 (EIA) (SLEIA)  
 Parivaran Parishad  
 E-5, Arera Colony, Bhopal (M.P.)

# District Survey Report: Chhatarpur

## District Survey Report: Chhatarpur

### 1 Introduction

In pursuance to the Gazette Notification, Ministry of Environment, Forest, and Climate Change (MoEF& CC), the Government of India Notification No. S.O. 141 (E) Appendix-X, Dated 15.01.2016 & S.O. 3611 (E) New Delhi, 25<sup>th</sup> July 2018 laid procedure for preparation of District Survey Report of sand mining or river bed mining. The main purpose of preparation of District Survey Report (DSR) is to identify the Sand resources and developing the sand mining activities along with other relevant data of the District.

The process of making a DSR includes:

- Collection of baseline data from the department
- Development of related maps from satellite and secondary sources
- Understanding river flows and sedimentation vis-à-vis sand mining
- Tabulation and mapping of existing sand mining locations and yield
- Correlation with satellite data for pre and post monsoon sand yield
- Suggesting new locations for sand mining approvals
- Drafting and Development of DSR as per MoEF guidelines
- Interaction with line department for data / document ownership

For the first time, the Ministry of Environment, Forests and Climate Change (MoEFCC) has released guidelines to monitor and check illegal sand mining in the country.

- Sustainable Sand Management Guidelines (SSMG), 2016 focuses on the management of sand mining, but there was a need to have guidelines for effective enforcement of regulatory provisions and their monitoring
- The 2020 guidelines are to be enforced simultaneously with the SSMG, 2016, in case of conflict; the new set will hold legal precedence. The Mines and Minerals (Development and Regulation) Act, 1957 has empowered state governments to make rules to prevent illegal mining, transportation, and storage of sand.
- However, there were a large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties to curb illegal mining.

*M*  
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(EPAO)  
Paryavaran Parikar  
E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

- \* Illegal and uncontrolled illegal mining also leads to loss of revenue to the State and degradation of the environment.

The fair and rapid advancement of technology in country has enabled surveillance and remote monitoring in the field of mining for the effective monitoring of the mining activities particularly sand mining. States are now utilizing remote sensing to prevent illegal mining. Rules have been made to prevent 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. Thus, an effective policy for monitoring of sand mining in the Country has been enforced focusing 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.

- \* Source to Destination Monitoring: The new set of guidelines focuses on the effective monitoring of sand mining from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public and look at a uniform protocol for the whole country.
- \* Constantly monitor mining with drones and night surveillance of mining activity through night-vision drones.
- \* Audits: States to carry out river audits put detailed survey reports of all mining areas in the public domain.
- \* Transparency: Online sales and purchase of sand and other riverbed materials (RRM) for transparency in the process.
- \* Enforcement: It gives directions to states to set up dedicated task forces at district levels.

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.

- \* Sustainability: Conduct replenishment study for river bed sand in order to nullify the adverse impacts arising due to excessive sand extraction.

State Level Directorate of Mines  
Assam State Assembly U.P.

For \_\_\_\_\_ Date \_\_\_\_\_

# District Survey Report: Chhatarpur

- While the Sustainable Sand Mining Guidelines, 2016, require the preparation of District Survey Reports (DSR), which is an important initial step before grant of mining lease, the government has found that the DSRs conducted by state and district administrations are often not comprehensive enough, allowing space for illegal mining.

## 1.1 Surrounding Districts

Chhatarpur district is located on the central portion on the plateau of Bundelkhand in M.P. the district is spread over an area of 8616.82 sq. km and is located at the northern boundary of the state, lying between north latitudes 24° 06' and 25° 20' and east longitude 79° 59' and 80° 26' falls under the survey of India toposheet No. 54O, 54P, 63D. The district is bounded by Mohoba district U.P in the north, Panna district, in the east Tikamgarh district in the west and Sagar & Damoh district in the south.

### History

Chhatarpur district is one of the 52 districts of Madhya Pradesh state of India. The headquarters of the district administration is located in the city of Chhatarpur, situated on the west side of Bhopal, Madhya Pradesh, at a distance of 336 kms. This district has 6 sections (sub division), 11 tehsils, 8 district panchayats, 3 municipalities and 12 municipal councils.

Chhatarpur is situated in the north eastern border of the state of Madhya Pradesh. It came into existence in 1956.

Chhatarpur is located within 24.06° to 25.20° North latitude and 78.59° to 80.26° East longitude. It comprises of an area of 8687 sq km. According to 1991 census, the total population of Chhatarpur is 11,53,076 out of it 6,23,878 are males and the number of females is 5,34,198.

Cultivation of crops like paddy, wheat and jowar is practiced in the district of Chhatarpur. Good quality timber is also produced here.

The important tourist spots are:

- Chausat Yogini
- Kandariya Mahadeo
- Chitragupta Temple

State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

- Lakshmana Temple
- Duhadeo Temple
- Chaturbhuj Temple

### 1.2 General Features

Table 1 Administrative Setup of the District

S. No.	SUB-DIVISION	BLOCK
1.	Chhatarpur	Bada Malhera
2.		Bijawar
3.		Buxwaha
4.		Chandla
5.		Chhatarpur
6.		Gaurihar
7.		Ghuwara
8.		Loundi
9.		Nowgaon
10.		Rajnagar
11.		Rajnagar
	Total	11

State Land Record Office  
Assessment Authority, M.P.  
(S.L.R.A.C.)  
Panjwani Sahib  
P.O. Arora Jhansi, Distt. (M.P.)

## District Survey Report: Chhatarpur

### 1.3 Location of the District

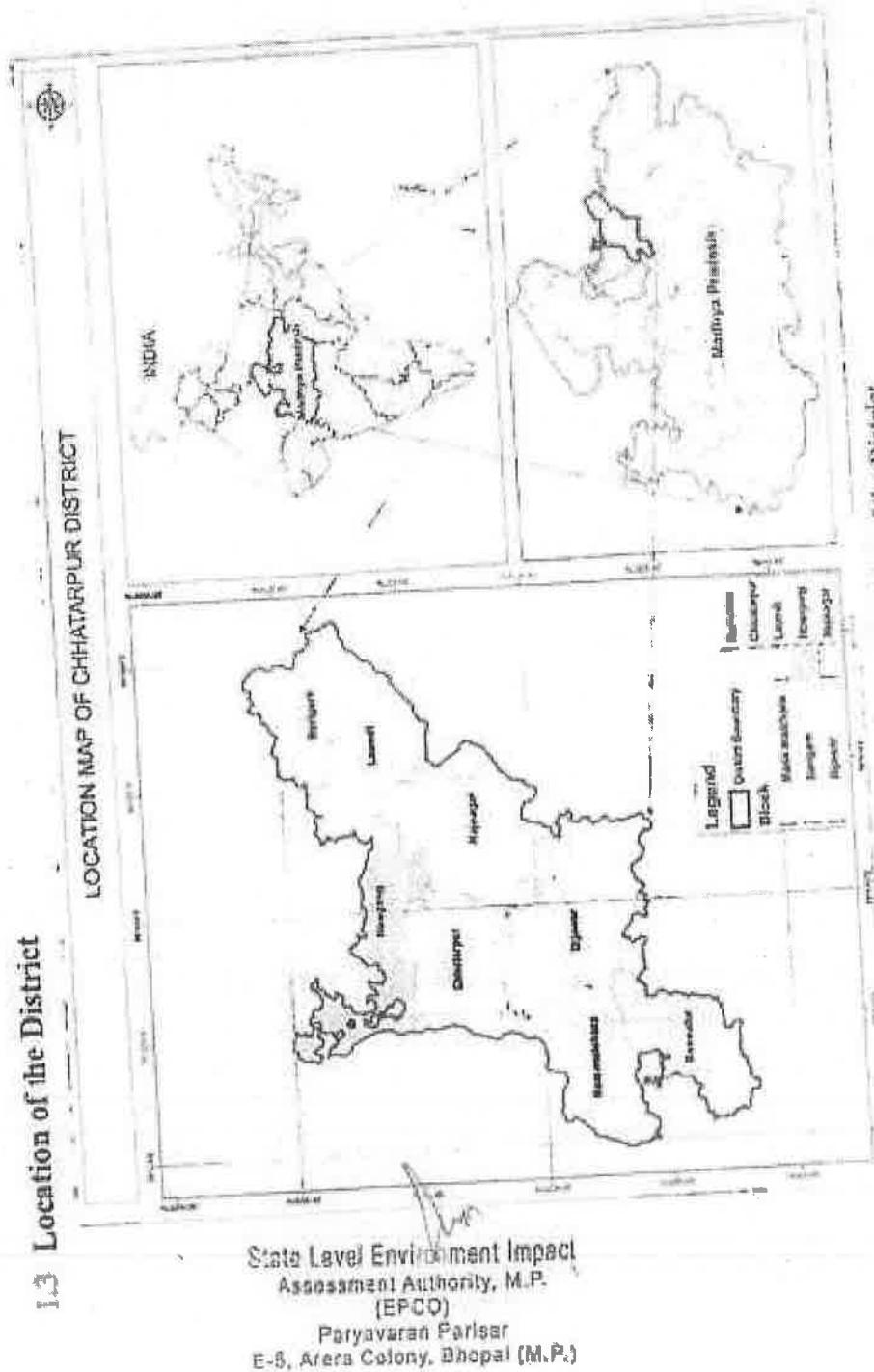


Figure 1 Location of the District

# District Survey Report: Chhatarpur

## 2 Overview of Mining Activity

The mineral found in Chhatarpur include Granite, Gitti, Flagstone and stone dust. Other minerals found in the district are murram, metal stone, and sand. Different litho units are mined for granite which includes Bundelkhand granite gneiss, metasedimentary, meta basicbands, and enclaves in the Bundelkhand granite.

Table 2 Mineral Production in the District 2020-21

Sr. No.	Mineral	Production
<b>Major Mineral</b>		
1.	Iron Ore	8315.55.00 Tone
2.	Rock Phosphate	10661.25 Tone
<b>Minor Mineral</b>		
3.	Boulder	11500.00 M3
4.	Gitti	1237999.96 M3
5.	Granite	36149.48 M3
6.	Sand	481070.12 M3
7.	Quartz	1237.78 Tone
8.	Quartzite for building material	4525.24 M3
9.	Diaspore	9294.21 Tone
10.	Pyrophyllite	131273.78 Tone

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Assessment Authority, M.P.  
Bhopal

Registration Number  
E-5, Arora Colony, Bhopal (M.P.)

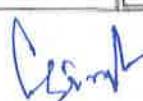
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**The list of Sand Mining Leases in the District - Chhatarpur  
With Location, area and Period of Validity**

क्र. सं. क.	नदी	Lease Detail				राज्य इमोर ने दिलाई मात्रा (घन मीटर)	Geo-Coordinates of the Lease		
		जिला	सहसील/ ग्राम	लैज अवधि	खसरा नं०		BP. No.	LATITUDE	LONGITUDE
1	केन	छत्तीसगढ़ पट्टमुर	गोरिहार/ शामपुर	30/06/ 2023	306/1	3.10/10000	1	25° 14'49.38"N	80°07'06.94"E
							2	25° 14'51.43"N	80°07'06.64"E
							3	25° 14'52.03"N	80°07'14.18"E
							4	25° 14'50.38"N	80°07'15.97"E
							5	25° 14'48.15"N	80°07'18.99"E
							6	25° 14'48.99"N	80°07'23.24"E
							7	25° 14'45.49"N	80°07'19.98"E
							8	25° 14'48.36"N	80°07'15.95"E
2	केन	छत्तीसगढ़ पट्टमुर	गोरिहार/ पड़वार-1	30/06/ 2023	1540/ 1	10.0/25000	1	25°20'55.27"N	80°18'30.31"E
							2	25°20'55.42"N	80°18'34.75"E
							3	25°20'52.25"N	80°18'35.80"E
							4	25°20'46.70"N	80°18'37.40"E
							5	25°20'40.90"N	80°18'40.20"E
							6	25°20'36.09"N	80°18'43.23"E
							7	25°20'32.17"N	80°18'46.39"E
							8	25°20'30.00"N	80°18'42.90"E
							9	25°20'33.90"N	80°18'39.20"E
							10	25°20'36.30"N	80°18'37.10"E
							11	25°20'39.28"N	80°18'35.90"E
							12	25°20'44.14"N	80°18'34.13"E
							13	25°20'49.41"N	80°18'32.21"E
3	केन	छत्तीसगढ़ पट्टमुर	गोरिहार/ ग्रामीणांग- 1	30/05/ 2023	396/2	14.0/150000	A	25°18'59.20"N	80°19'09.20"E
							B	25°19'22.61"N	80°19'06.79"E
							C	25°19'22.93"N	80°19'10.56"E
							D	25°19'33.50"N	80°19'11.80"E
							E	25°19'34.30"N	80°19'14.70"E

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (एसएलईआय)  
 Pethwari, Dausa, Bharatpur  
 E-5, A/S/2nd Colony, Bhupal (M.P.)

							P	25°18'59.50"N	80°19'12.80"E
4	केन	छतापुर	गौरिहार/ बजारा	30/06/ 2023	609	3.990/15000	BP. No.	LATITUDE	LONGITUDE
							1	25°24'17.53"N	80°17'53.30"E
							2	25°24'24.13"N	80°17'53.94"E
							3	25°24'17.67"N	80°18'01.96"E
							4	25°24'13.84"N	80°17'56.79"E
5	केल	छतापुर	गौरिहार/ रेतना	30/06/ 2023	1298/ 1	2.150/8,000	BP. No.	LATITUDE	LONGITUDE
							A	25° 16'28.56"N	80°09'45.67"E
							B	25° 16'28.90"N	80°09'47.30"E
							C	25° 16'33.02"N	80°09'48.42"E
							D	25° 16'34.31"N	80°09'48.65"E
							E	25° 16'35.92"N	80°09'49.46"E
							F	25° 16'38.87"N	80°09'51.16"E
							G	25° 16'40.18"N	80°09'49.14"E
							H	25° 16'39.50"N	80°09'48.63"E
							I	25° 16'38.27"N	80°09'47.51"E
							J	25° 16'37.37"N	80°09'47.07"E
							K	25° 16'35.20"N	80°09'46.64"E
							L	25° 16'34.14"N	80°09'46.70"E
6	केन	छतापुर	गौरिहार/ फोई-1	30/06/ 2023	613/1	5.000/60,000	BP. No.	LATITUDE	LONGITUDE
							A	25°24'29.29"N	80°17'36.74"E
							B	25°24'33.03"N	80°17'39.88"E
							C	25°24'25.40"N	80°17'50.60"E
							D	25°24'22.00"N	80°17'48.10"E
7	बोन	छतापुर	गौरिहार/ पडवार-2	30/06/ 2023	1540/ 1	6.00/20,000	BP. No.	LATITUDE	LONGITUDE
							1	25°21'24.00"N	80°18'28.97"E
							2	25°21'38.36"N	80°18'35.99"E
							3	25°21'38.50"N	80°18'36.82"E
							4	25°21'40.08"N	80°18'37.22"E
							5	25°21'36.36"N	80°18'40.39"E
							6	25°21'27.32"N	80°18'34.33"E
							7	25°21'22.57"N	80°18'32.32"E
8	केन	छतापुर	गौरिहार/ मकांगाट-	30/06/ 2023	39	7.000/50,000	BP. No.	LATITUDE	LONGITUDE

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EIA)  
 Paryavaran Parivar  
 E-5, Arera Colony, Bhopal (M.P.)

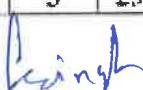
**State Level Environment Impact  
Assessment Authority, M.P.  
(EIA-D)**  
Parivartan Pratishar  
E-5, Arera Colony, Bhopal (M.P.)

							<b>A</b> 25°14'52.75"N 80°21'50.65"E <b>B</b> 25°14'51.15"N 80°21'55.41"E <b>C</b> 25°14'59.29"N 80°22'00.30"E <b>D</b> 25°15'01.00"N 80°21'55.83"E
14	केन	पत्तापुर	गौरिहर / बासीदोडा	30/06/ 2023	269/2 31	10.0/70,000	<b>BP.</b> <b>LATITUDE</b> <b>LONGITUDE</b> No. 1 25°14'36.79"N 80°23'36.36"E 2 25°14'40.28"N 80°23'40.08"E 3 25°14'44.13"N 80°23'48.44"E 4 25°14'43.72"N 80°23'54.44"E 5 25°14'41.50"N 80°23'59.60"E 6 25°14'37.29"N 80°23'57.37"E 7 25°14'38.30"N 80°23'53.49"E 8 25°14'38.19"N 80°23'48.58"E 9 25°14'36.04"N 80°23'41.46"E 10 25°14'34.43"N 80°23'38.87"E
15	केन	पत्तापुर	गौरिहर / महानाया	30/06/ 2023	1163	4.0/20,000	<b>BP.</b> <b>Latitude</b> <b>Longitude</b> No.. 1 25° 8'45.95"N 80°21'43.22"E 2 25° 8'47.55"N 80°21'45.00"E 3 25° 8'48.06"N 80°21'47.27"E 4 25° 8'47.30"N 80°21'47.96"E 5 25° 8'47.07"N 80°21'47.53"E 6 25° 8'46.73"N 80°21'47.36"E 7 25° 8'45.74"N 80°21'47.55"E 8 25° 8'46.16"N 80°21'48.80"E 9 25° 8'47.65"N 80°21'49.13"E 10 25° 8'48.11"N 80°21'48.52"E 11 25° 8'48.66"N 80°21'48.30"E 12 25° 8'48.61"N 80°21'49.72"E 13 25° 8'43.17"N 80°21'52.55"E 14 25° 8'42.16"N 80°21'50.30"E 15 25° 8'39.58"N 80°21'46.64"E
16	केन	पत्तापुर	गौरिहर / अजौतापुर	30/06/ 2023	656	4.0/22,000	<b>BP.</b> <b>LATITUDE</b> <b>LONGITUDE</b> No. 1 25° 8'57.94"N 80°22'35.91"E 2 25° 8'57.99"N 80°22'44.05"E 3 25° 8'52.48"N 80°22'42.08"E 4 25° 8'51.86"N 80°22'34.05"E

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State Level Environment Impact  
Assessment Authority, M.P.  
(EIA) By  
Parivartan Parivar  
E-5, Arera Colony, Bhopal (M.P.)

S. No.	District	Block	Village/ Gram Panchayat	Date	BP No.	Scale	Geographical Coordinates		
							BP. No.	Latitude	Longitude
17	कैन	छतरपुर	गोपिनाथ/ बारवाह-4	30/06/2023	472/2	10.0/80,000	1	25° 9'51.72"N	80°24'53.55"E
							2	25° 9'55.40"N	80°25'05.45"E
							3	25° 9'59.39"N	80°25'15.66"E
							4	25° 9'56.52"N	80°25'19.56"E
							5	25° 9'50.01"N	80°25'05.70"E
							6	25° 9'47.65"N	80°24'56.64"E
18	कैन	छतरपुर	गोपिनाथ/ गोयरा-2	30/06/2023	2531/13	10.0/80,000	1	25°14'50.88"N	80°21'56.90"E
							2	25°14'58.84"N	80°22'00.86"E
							3	25°14'55.27"N	80°22'06.95"E
							4	25°14'50.00"N	80°22'13.49"E
							5	25°14'44.43"N	80°22'09.85"E
							6	25°14'47.74"N	80°22'03.70"E
							7	25°14'50.31"N	80°21'59.82"E
19	कैन	छतरपुर	गोपिनाथ/ कल्लोपुर	30/06/2023	2/2	2.0/40,000	1	25°16'07.70"N	80°21'19.53"E
							2	25°16'07.73"N	80°21'22.50"E
							3	25°16'00.73"N	80°21'23.09"E
							4	25°16'00.71"N	80°21'19.72"E
20	कैन	छतरपुर	गोपिनाथ/ धीराम रेत स्थान	30/06/2023	332	5.20/70,000	1	25°07'49.88"N	80°21'07.69"E
							2	25°07'48.83"N	80°21'14.91"E
							3	25°07'44.88"N	80°21'13.99"E
							4	25°07'40.80"N	80°21'13.82"E
							5	25°07'37.62"N	80°21'12.74"E
							6	25°07'37.87"N	80°21'09.32"E
							7	25°07'40.86"N	80°21'09.52"E
							8	25°07'47.04"N	80°21'07.96"E
21	गोम	छतरपुर	गोपिनाथ/ मेहरा	30/06/2023	697/1	14.0/1,00000	1	25°04'50.44"N	80°19'04.71"E
							2	25°04'48.90"N	80°19'08.13"E
							3	25°04'35.69"N	80°19'01.54"E

  
 State Level Environment Impact  
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 E-5, Arera Colony, Bhopal (M.P.)

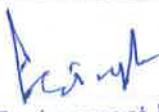
4	25°04'14.36"N	80°18'37.30"E
5	25°04'13.02"N	80°18'33.96"E
6	25°04'16.26"N	80°18'30.58"E
7	25°04'16.49"N	80°18'32.87"E
8	25°04'19.17"N	80°18'37.51"E
9	25°04'24.22"N	80°18'46.63"E
10	25°04'25.32"N	80°18'47.30"E
11	25°04'34.59"N	80°18'56.92"E
12	25°04'42.87"N	80°19'01.66"E

BP. No.	LATITUDE		LONGITUDE	
	1	25°10'01.61"N	80°25'18.78"E	
1	25°10'08.93"N	80°25'28.68"E		
2	25°10'19.65"N	80°25'37.35"E		
3	25°10'16.46"N	80°25'42.50"E		
4	25°10'09.21"N	80°25'36.51"E		
5	25° 9'58.59"N	80°25'21.97"E		

BP. No.	LATITUDE		LONGITUDE	
	1	25°10'27.54"N	80°25'41.44"E	
1	25°10'32.83"N	80°25'43.03"E		
2	25°10'40.51"N	80°25'43.36"E		
3	25°10'51.65"N	80°25'40.55"E		
4	25°10'52.79"N	80°25'45.44"E		
5	25°10'48.50"N	80°25'46.69"E		
6	25°10'42.46"N	80°25'48.93"E		
7	25°10'36.35"N	80°25'49.25"E		
8	25°10'29.02"N	80°25'47.61"E		
9	25°10'26.12"N	80°25'46.94"E		

BP. No.	LATITUDE		LONGITUDE	
	A	25° 0'2.13"N	80°13'44.11"E	
B	25° 0'3.06"N	80°13'40.76"E		
C	25° 0'27.21"N	80°14'2.00"E		
D	25° 0'23.96"N	80°14'5.81"E		

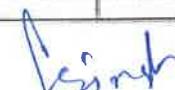
BP. No.	LATITUDE		LONGITUDE	
	A	24°59'32.55"N	80°13'12.91"E	
B	24°59'34.00"N	80°13'09.40"E		
C	24°59'39.53"N	80°13'15.95"E		
D	24°59'59.28"N	80°13'34.81"E		
E	24°59'53.78"N	80°13'36.45"E		

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
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 Paryavaran Parisar  
 E-5, Arera Colony, Bhopal (M.P.)

							F	24°59'45.78"N	80°13'28.64"E
							BP. No.	LATITUDE	LONGITUDE
							1	25°03'18.00"N	80°17'13.30"E
							2	25°03'15.40"N	80°17'13.60"E
							3	25°03'12.00"N	80°17'13.50"E
							4	25°03'08.70"N	80°17'13.80"E
							5	25°03'05.40"N	80°17'14.00"E
							6	25°03'02.40"N	80°17'14.10"E
							7	25°02'59.10"N	80°17'14.60"E
							8	25°02'56.80"N	80°17'14.70"E
							9	25°02'56.66"N	80°17'09.50"E
							10	25°03'00.05"N	80°17'08.88"E
							11	25°03'05.26"N	80°17'08.01"E
							12	25°03'10.02"N	80°17'07.24"E
							13	25°03'13.94"N	80°17'07.04"E
							14	25°03'20.11"N	80°17'07.13"E
							BP. No.	LATITUDE	LONGITUDE
							1	25°02'18.00"N	80°17'03.10"E
							2	25°02'23.01"N	80°17'05.04"E
							3	25°02'26.56"N	80°17'06.26"E
							4	25°02'31.72"N	80°17'08.71"E
							5	25°02'39.46"N	80°17'09.48"E
							6	25°02'48.01"N	80°17'10.37"E
							7	25°02'47.90"N	80°17'14.50"E
							8	25°02'43.40"N	80°17'13.50"E
							9	25°02'37.90"N	80°17'12.90"E
							10	25°02'31.70"N	80°17'12.00"E
							11	25°02'26.00"N	80°17'11.60"E
							12	25°02'19.30"N	80°17'09.00"E
							13	25°02'16.20"N	80°17'07.50"E

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (E.P.C.O.)  
 Paryavaran Parishad  
 E-5, Arera Colony, Bhopal (M.P.)

S. No.	District	Taluk	Village / Gram Panchayat	Date	Slip No.	Area	BP. No. LATITUDE LONGITUDE		
							BP. No.	LATITUDE	LONGITUDE
28	Ujjain	Chatarpur	Chandola / Surajpur	30/06/2023	818	4.00/15,000	1	24°58'12.41"N	80°02'56.91"E
							2	24°58'11.75"N	80°02'58.41"E
							3	24°58'11.34"N	80°03'00.67"E
							4	24°58'10.78"N	80°03'03.26"E
							5	24°58'10.45"N	80°03'06.15"E
							6	24°58'10.44"N	80°03'10.41"E
							7	24°58'10.04"N	80°03'13.65"E
							8	24°58'09.54"N	80°03'16.88"E
							9	24°58'07.99"N	80°03'19.86"E
							10	24°58'02.18"N	80°03'26.31"E
							11	24°58'00.50"N	80°03'25.18"E
							12	24°58'03.69"N	80°03'22.33"E
							13	24°58'05.43"N	80°03'20.23"E
							14	24°58'08.53"N	80°03'14.12"E
							15	24°58'09.05"N	80°03'11.19"E
							16	24°58'09.27"N	80°03'08.19"E
							17	24°58'09.22"N	80°03'05.93"E
							18	24°58'09.63"N	80°03'02.53"E
							19	24°58'11.09"N	80°02'56.38"E
29	Kanpur	Chatarpur	Chandola / Hindaon	30/06/2023	495/2	4.000/20,000	BP. No.	LATITUDE	LONGITUDE
							1	25° 1'36.24"N	80°15'35.06"E
							2	25° 1'37.13"N	80°15'43.55"E
							3	25° 1'37.03"N	80°15'45.88"E
							4	25° 1'33.39"N	80°15'45.83"E
30	Kanpur	Chatarpur	Chandola / Sankarpur	30/06/2023	1400	4.000/35,000	BP. No.	LATITUDE	LONGITUDE
							1	24°58'05.88"N	80°10'47.37"E
							2	24°58'10.65"N	80°10'58.60"E
							3	24°58'07.34"N	80°11'00.26"E
31	Kanpur	Chatarpur	Chandola / Bhawari no 2	30/06/2023	854	8.000/8,000	BP. No.	LATITUDE	LONGITUDE
							1	25°01'36.10"N	80°15'46.10"E
							2	25°01'35.46"N	80°15'56.14"E

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPAO)  
 Paryavaran Parishar  
 E-5, Arera Colony, Bhopal (M.P.)

**State Level Environment Impact  
Assessment Authority, M.P.  
(EPGQ)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)**

6	24°58'23.83"N	80°02'19.03"E
7	24°58'24.93"N	80°02'12.78"E
8	24°58'29.16"N	80°01'54.48"E
9	24°58'29.09"N	80°01'53.20"E
10	24°58'29.67"N	80°01'49.47"E

BP. No.	LATITUDE	LONGITUDE
1	24°46'54.00"N	79°43'58.10"E
2	24°46'54.30"N	79°43'59.02"E
3	24°46'51.90"N	79°43'59.81"E
4	24°46'50.26"N	79°43'59.96"E
5	24°46'45.55"N	79°43'56.73"E
6	24°46'44.50"N	79°43'55.49"E
7	24°46'38.80"N	79°43'53.19"E
8	24°46'37.04"N	79°43'52.26"E
9	24°46'33.44"N	79°43'49.41"E
10	24°46'33.70"N	79°43'48.98"E
11	24°46'35.76"N	79°43'50.08"E
12	24°46'43.62"N	79°43'53.89"E
13	24°46'49.61"N	79°43'58.35"E
14	24°46'52.79"N	79°43'58.55"E

BP. No.	LATITUDE	LONGITUDE
1	25° 5'22.54"N	79°57'31.95"E
2	25° 5'23.98"N	79°57'32.88"E
3	25° 4'59.70"N	79°57'52.80"E
4	25° 4'59.10"N	79°57'51.70"E

BP. No.	LATITUDE	LONGITUDE
A	25°11'18.62"N	79°17'13.44"E
B	25°11'20.95"N	79°17'15.30"E
C	25°11'15.05"N	79°17'22.07"E
D	25°11'13.11"N	79°17'24.16"E
E	25°11'4.82"N	79°17'35.82"E
F	25°11'2.57"N	79°17'34.15"E
G	25°11'11.10"N	79°17'21.76"E
H	25°11'12.44"N	79°17'19.90"E
I	25°11'16.81"N	79°17'14.86"E

BP. No.	LATITUDE	LONGITUDE
574	6.000/30,000	

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCA)  
 Paryavaran Parivar  
 E-5, Arera Colony, Bhopal (M.P.)

S. No.	District	Block	Village / Gram Panchayat	Date	BP No.	Scale	Survey Data		
							Latitude	Longitude	Altitude
39	पटना	छतरपुर	नीमांव / अलीपुरा-2	30/06/ 2023	2113	7.000/50,000	BP. No.	LATITUDE	LONGITUDE
							1	25° 9'58.26"N	79°18'44.38"E
							2	25°10'00.58"N	79°18'47.84"E
							3	25° 9'57.09"N	79°18'48.42"E
							4	25° 9'54.05"N	79°18'49.50"E
							5	25° 9'50.97"N	79°18'50.00"E
							6	25° 9'42.51"N	79°18'55.31"E
							7	25° 9'40.72"N	79°18'51.36"E
							8	25° 9'48.03"N	79°18'46.53"E
40	पटना	छतरपुर	नीमांव / टीका-1	30/06/ 2023	574	4.000/45,000	BP. No.	LATITUDE	LONGITUDE
							1	25° 7'54.73"N	79°20'1.93"E
							2	25° 7'40.35"N	79°20'3.81"E
							3	25° 7'40.45"N	79°20'0.45"E
							4	25° 7'54.40"N	79°19'58.76"E
41	पटना	छतरपुर	नीमांव / अलीपुरा-1	30/06/ 2023	2113	4.000/35,000	BP. No.	LATITUDE	LONGITUDE
							1	25° 9'41.32"N	79°18'56.81"E
							2	25° 9'32.81"N	79°19'03.64"E
							3	25° 9'30.66"N	79°19'00.31"E
							4	25° 9'38.74"N	79°18'52.99"E
42	कथान	छतरपुर	बदामखाड़ा / भारा (सिंजयाला)	30/06/ 2023	128	3.520/35,000	BP. No.	LATITUDE	LONGITUDE
							1	24°40'59.17"N	79°18'08.86"E
							2	24°40'59.47"N	79°18'10.23"E
							3	24°40'58.17"N	79°18'10.42"E
							4	24°40'50.80"N	79°18'12.83"E
							5	24°40'49.23"N	79°18'13.00"E
							6	24°40'40.24"N	79°18'11.69"E
							7	24°40'39.23"N	79°18'11.91"E
							8	24°40'37.20"N	79°18'13.35"E
							9	24°40'33.95"N	79°18'16.77"E
							10	24°40'32.30"N	79°18'17.29"E

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11	24°40'29.79"N	79°18'17.27"E
12	24°40'29.90"N	79°18'15.44"E
13	24°40'33.49"N	79°18'14.89"E
14	24°40'34.82"N	79°18'14.51"E
15	24°40'35.99"N	79°18'13.09"E
16	24°40'38.24"N	79°18'11.14"E
17	24°40'38.94"N	79°18'09.82"E
18	24°40'42.30"N	79°18'10.16"E
19	24°40'42.99"N	79°18'10.83"E
20	24°40'44.33"N	79°18'11.15"E
21	24°40'46.33"N	79°18'11.28"E
22	24°40'50.07"N	79°18'11.89"E
23	24°40'53.98"N	79°18'09.84"E
24	24°40'55.97"N	79°18'09.80"E

BP. No.	LATITUDE	LONGITUDE
1	24°40'43.15"N	79°33'42.04"E
2	24°40'45.22"N	79°33'44.36"E
3	24°40'45.92"N	79°33'46.03"E
4	24°40'46.53"N	79°33'48.83"E
5	24°40'47.59"N	79°33'55.36"E
6	24°40'47.51"N	79°33'56.71"E
7	24°40'47.19"N	79°33'58.44"E
8	24°40'46.22"N	79°34'01.00"E
9	24°40'45.72"N	79°34'04.08"E
10	24°40'45.95"N	79°34'07.34"E
11	24°40'45.27"N	79°34'07.43"E
12	24°40'45.06"N	79°34'05.60"E
13	24°40'45.19"N	79°34'04.49"E
14	24°40'45.37"N	79°34'00.31"E
15	24°40'46.54"N	79°33'57.21"E
16	24°40'46.72"N	79°33'54.62"E
17	24°40'46.31"N	79°33'52.00"E

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18	24°40'45.33"N	79°33'48.89"E
19	24°40'45.16"N	79°33'46.29"E
20	24°40'44.40"N	79°33'44.78"E
21	24°40'42.57"N	79°33'42.77"E
BP. No.	LATITUDE	LONGITUDE
1	24°40'04.19"N	79°35'08.51"E
2	24°40'04.59"N	79°35'08.96"E
3	24°40'03.81"N	79°35'11.70"E
4	24°40'02.08"N	79°35'16.37"E
5	24°40'00.34"N	79°35'18.85"E
6	24°40'00.23"N	79°35'21.41"E
7	24°40'00.56"N	79°35'26.32"E
8	24°40'00.33"N	79°35'28.25"E
9	24°40'59.89"N	79°35'29.18"E
10	24°39'59.25"N	79°35'29.89"E
11	24°39'57.09"N	79°35'30.16"E
12	24°39'52.52"N	79°35'29.11"E
13	24°39'51.82"N	79°35'28.71"E
14	24°39'51.82"N	79°35'26.96"E
15	24°39'53.28"N	79°35'28.79"E
16	24°39'57.44"N	79°35'29.45"E
17	24°39'58.86"N	79°35'29.05"E
18	24°39'59.65"N	79°35'28.20"E
19	24°39'59.97"N	79°35'27.10"E
20	24°39'59.47"N	79°35'22.60"E
21	24°39'59.52"N	79°35'18.74"E
22	24°40'01.80"N	79°35'14.58"E
23	24°40'03.65"N	79°35'09.38"E

  
 State Level Environmental Impact  
 Assessment Agency, M.P.  
 (E.F., )  
 Paryavaran Parishad  
 E-5, Arera Colony, Bhopal (M.P.)

BP. No.	LATITUDE		LONGITUDE	
	1	2	3	4
1	24°39'31.04"N	79°35'40.98"E		
2	24°39'31.48"N	79°35'41.63"E		
3	24°39'29.85"N	79°35'43.04"E		
4	24°39'27.73"N	79°35'44.25"E		
5	24°39'26.55"N	79°35'44.69"E		
6	24°39'23.69"N	79°35'45.72"E		
7	24°39'21.45"N	79°35'48.32"E		
8	24°39'19.02"N	79°35'49.21"E		
9	24°39'17.45"N	79°35'49.91"E		
10	24°39'16.71"N	79°35'49.23"E		
11	24°39'18.75"N	79°35'48.29"E		
12	24°39'21.61"N	79°35'47.13"E		
13	24°39'23.37"N	79°35'45.01"E		
14	24°39'27.07"N	79°35'43.64"E		
15	24°39'29.70"N	79°35'42.39"E		
BP. No.	LATITUDE		LONGITUDE	
	1	2	3	4
1	24°53'10.00"N	79°20'43.60"E		
2	24°53'11.11"N	79°20'45.22"E		
3	24°53'09.42"N	79°20'46.74"E		
4	24°53'08.18"N	79°20'47.60"E		
5	24°53'06.96"N	79°20'48.87"E		
6	24°53'04.25"N	79°20'50.35"E		
7	24°53'02.24"N	79°20'51.82"E		
8	24°53'00.22"N	79°20'52.72"E		
9	24°52'58.91"N	79°20'50.96"E		
10	24°53'00.05"N	79°20'50.48"E		
11	24°52'59.94"N	79°20'50.07"E		
12	24°53'0.57"N	79°20'49.64"E		
13	24°53'01.63"N	79°20'49.71"E		
14	24°53'02.21"N	79°20'49.35"E		
15	24°53'03.05"N	79°20'48.48"E		
16	24°53'04.16"N	79°20'47.88"E		
17	24°53'04.83"N	79°20'47.08"E		
18	24°53'06.07"N	79°20'46.74"E		

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S. No.	District	Taluk	Village / Gram Panchayat	Date	BP No.	Scale	Geographical Coordinates		
							BP. No.	Latitude	Longitude
47	Rajgarh	Chatarpur	Chatarpur / Ramnagar (Kuwar)	30/06/2023	701	1:40/10,000	1	24°51'23.95"N	79°21'22.63"E
							2	24°51'24.42"N	79°21'23.07"E
							3	24°51'14.55"N	79°21'33.61"E
							4	24°51'08.83"N	79°21'38.62"E
							5	24°51'07.91"N	79°21'39.63"E
							6	24°51'07.64"N	79°21'39.00"E
							7	24°51'08.81"N	79°21'37.65"E
							8	24°51'14.19"N	79°21'32.70"E
							9	24°51'14.89"N	79°21'32.27"E
48	Kherda Nala	Chatarpur	Chatarpur / Kherda Nala	30/06/2023	672	1:50/12,000	1	24°49'7.70"N	79°40'19.45"E
							2	24°49'6.68"N	79°40'22.43"E
							3	24°49'3.98"N	79°40'26.08"E
							4	24°49'2.77"N	79°40'29.25"E
							5	24°49'2.40"N	79°40'35.67"E
							6	24°49'2.12"N	79°40'39.77"E
							7	24°49'3.88"N	79°40'41.92"E
							8	24°49'6.88"N	79°40'42.96"E
							9	24°49'6.84"N	79°40'43.52"E
							10	24°49'3.29"N	79°40'42.44"E
							11	24°49'1.32"N	79°40'39.32"E
							12	24°49'1.82"N	79°40'30.85"E
							13	24°49'2.74"N	79°40'27.47"E
							14	24°49'5.94"N	79°40'22.67"E
							15	24°49'7.18"N	79°40'19.99"E

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## District Survey Report: Chhatarpur

### 4 Details of Royalty and Revenue received in last three years for Sand and Minor Mineral (2018-19, 2019-20 and 2020-2021):

Table 4: Revenue received in last three years for Sand

Year	Revenue (In Rs.)
2018-19	8,93,93,834.25
2019-20	18,99,75,000.00
2020-21	27,64,93,790.00

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**5) Details of Sand Production in last 3 years (2018-19, 2019-20 and 2020-2021):**

**Table- 5 Sand Production in last 3 years**

<b>Year</b>	<b>Production (In Cu.Mt)</b>
2018-19	602351.00
2019-20	257111.3
2020-21	481070.12

*Dinkar*  
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## (6) Process of Deposition of Sediments in the rivers of the District

Physiographically the district has been divided broadly in to three main geomorphic units. The Panna range, the central plateau & northern plains range which traverses district in a south west north east direction. This range separates the upper Bundelkhand from lower bundelkhand plateau. Overlying the archeans is if formed by Bijawar and vindhyan beds which are highly folded and are also dissected by the superimposed drainage system. The highest peak lies at Ban pathar (240 37': 790 45") in the district at 607 m amsl. The central plateau runs to the north as an offshoot of Panna range. It lies mainly on the Bundelkhand granites & forms the central sub water divide. The give way to lower plains along the ken and Dhasan in the east & west respectively. The northern plateau lies between 150 to 300 m amsl & covers nearly the whole of Joudi Tehsil. It is covered by varying thickness of alluvium but is cut in ravines resulting in "bad land" topography.

### i) Geomorphology: Place of origin / Catchment area/Tributaries/General profile of river stream;

Geomorphologically, The Ken, one of the tributary of Yamuna flows through the Madhya Pradesh and Uttar Pradesh states. The Ken river has its origin on the north-west slopes of the Kaimur hills in the Satna district of Madhya Pradesh. It generally flows in a north-easterly direction and joins the Yamuna near Chilla. The river has a total length of 357 km and forms a state boundary between Chhattarpur district of Madhya Pradesh and Banda district of Uttar Pradesh. The tributaries of Ken are the Sonar, the Bearma, the Kopra, the Bewas, the Urmil, the Mirhasan, the Kutni, the Kail, the Gurne, the Patan, the Siameri, the Chandrawal, the Banne etc. The longest tributary is Sonar which is 227 km in length and wholly lies in Madhya Pradesh.

*Bir Singh*

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## **Drainage basin**

### **Ken basin**

The Ken River originates from the Ahirgawan village on the north-west slopes of the Kaimur hills in the Jabalpur district of Madhya Pradesh at an elevation of about 550 m above mean sea level. The total length of the river from its origin to its confluence with the Yamuna River is 427 km, out of which 292 km lies in Madhya Pradesh, 84 km in Uttar Pradesh and 51 km of its course forms the common boundary between the two states. The river joins the Yamuna River near village Chilla in Uttar Pradesh at an elevation of about 95 m. The river is the last tributary of Yamuna before the Yamuna joins the Ganga. The river basin lies between  $23^{\circ}12' - 25^{\circ}54'$  N latitudes and  $78^{\circ}30' - 80^{\circ}36'$  E longitudes. The total catchment area of the river is 28058 sq. km, out of which 24472 sq. km lies in Madhya Pradesh and the remaining 3586 sq. km in Uttar Pradesh.

The Ken basin covers Sagar, Damoh, Panna, Satna, Chhatarpur, Katni, Narsinghpur and Raisen districts of Madhya Pradesh and Mahoba and Bandad districts of Uttar Pradesh. It is bounded by Vindhyan range in the south, Betwa basin on west, free catchment of Yamuna below Ken on east, and the river Yamuna on north. The important tributaries of Ken are Alona, Bearma, Sonar, Mirhasan, Shyamari, Banne, Kutni, Urmil, Kail and Chandrawal. The longest tributary of Ken River is Sonar which is 199 km in length and lies wholly in M.P. in the upstream of the Daudhan dam site. In terms of catchment area also, Sonar is the largest tributary with a catchment area of 12620 sq. km. Out of the others, Alona, Bearma, Mirhasan and Shyamari join Ken River upstream of the proposed Daudhan dam. River Banne on which the Rangawaran dam is constructed joins Ken River between the proposed dam site and the existing Bariyarpur Pick Up Weir (P.U.W.), while Kutni, Urmil, Kail and Chandrawal join downstream of Bariyarpur P.U.W. Urmil and Kail rivers have part of their catchments in Uttar Pradesh while river Chandrawal has the most of its catchment area in Uttar Pradesh.

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Dhasan River is a right bank tributary of the Betwa River. The river originates in Begumganj tehsil of Raisen district in Madhya Pradesh state in central India. The river forms the southeastern boundary of the Lalitpur District of Uttar Pradesh state. Total length of the river is 365 km, out of which 240 km lies in Madhya Pradesh, 54 km common boundary between Madhya Pradesh and Uttar Pradesh and 71 km in Uttar Pradesh. The river was known as the *Dasharna* in ancient period. The Lechhura Dam is built on this river at 2 km from Harpalpur railway station.

Urmil River has an overall drainage basin of 3500 km<sup>2</sup>. The Ken basin covers Sagar, Damoh, Panna, Satna, Chhatarpur, Katni, Narsinghpur and Raisen districts of Madhya Pradesh and Mahoba and Banda districts of Uttar Pradesh. It is bounded by Vindhyan range in the south, Betwa basin on west, free catchment of Yamuna below Ken on east, and the river Yamuna on north. The important tributaries of Ken are Alona, Bearma, Sonar, Mirhasan, Shyamari, Banne, Kutni, Urmil, Kail and Chandrawal. The longest tributary of Ken River is Sonar which is 199 km in length and lies wholly in M.P. in the upstream of the Daudhan dam site. In terms of catchment area also, Sonar is the largest tributary with a catchment area of 12620 sq. km. Out of the others, Alona, Bearma, Mirhasan and Shyamari join Ken River upstream of the proposed Daudhan dam. River Banne on which the Rangawan dam is constructed joins Ken River between the proposed dam site and the existing Bariyarpur Pick Up Weir (P.U.W.), while Kutni, Urmil, Kail and Chandrawal join downstream of Bariyarpur P.U.W. Urmil and Kail rivers have part of their catchments in Uttar Pradesh while river Chandrawal has the most of its catchment area in Uttar Pradesh.

#### ii) Geology / Lithostratigraphy :

Geologically, the area comes under the stream bed. The alluvium deposits consist series of Pebby sand, fine to medium sand and clays. The flood plains on the bank of the Ken river comprising brown silt, fine sand and charcoal bearing red silt sand, gravel and conglomerate.

  
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The basement and near by rock formations are part of Bundelkhand Gneissic complex of Archaean age. The near by rock formations comprises Pink, meedium to coarse grained massive rock.

**iii) Climatic Data & Annual precipitation:**

A hot summer and general dryness except during the South west monsoon season. The year may divided into four season. The cold season, December to February is followed by hot season from March to middle of June. The period from middle of June to September in the south west monsoon season. October and November from the post monsoon or transition period. The nearest IMD observatory in Nowgaon.

The normal annual rainfall of Chhatarpur district is 1068.3 mm. the district receives maximum rainfall during south west monsoon period i.e. June to September. About 90.2% of the annual rainfall received during monsoon season. Only 9.8% of the annual rainfall takes place between October to May period.

The normal maximum temperature received during the month of May is 42.30C & minimum during the month of January is 7.10 C the normal annual means maximum & minimum temperature of Chhatarpur district is 32.70 C and 18.10 C respectively.

During the south west monsoon season the relative humidity generally exceeds 88% (August month) & the rest of the year is drier. The driest part of the year is the summer season, when relative humidity is less than 30% may is the driest month of the year.

**iv) Erosion & Weathering:**

Since the temperature variation during various seasons in a year is quite considerable high degree of weathering is likely to result. The rainfall being moderate, the potential of transportation of weathering material into river is also moderate.

**v) Sedimentation & Transportation:**

In the context of stream sediments is inorganic and organic material that is transported by, suspended in, or deposited by streams. Sediment load, which is the quantity of sediment transported by a stream, is a function of stream discharge, soil and land-cover features, weather conditions, land use activities, and many other factors. Sediment load carried by streams and rivers can be composed either of fine materials, mostly silts and clays, or larger materials such as sand.

When a river erodes the eroded material becomes the river's load and the river will then transport this load through its course until it deposits the load. There are a few different ways that a river will transport load depending on how much energy the river has and how big the load is.

**vi) Engineering Structures stop dam/ check dam/ barrage/**

**Hydel dams :**

Man made structures like stop dam / check dam / barrage / and hydel dams also affects the sand flow and act as check over the sand deposition in downstream area.

**vii) Activity near river bank:**

Any man made activity such as mining / trenching/channeling/canal etc. produce large quantity of fines of existing rocks with transports in river bed may deposited nearby the area in river course.

**viii) Tributaries and its confluences:**

A stream may be 1<sup>st</sup> order to 3<sup>rd</sup> order, that is to a streamlet to a major one, have a great impact on deposition of sand where some physiographic features are also have imperative role:

- a. Tributary / confluence
- b. Meanders
- c. Negative reliefs
- d. Slope / gradients

  
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## **PROCESS OF REPLENISHMENT (SEDIMENT TRANSPORTAION AND DEPOSITION)**

Sediments in rivers gets deposited as the river slows down. Larger,Heavier particles like pebbles and sand are deposited first, while the lighter silt and clay only settle if the water is almost still. When river reaches a lake or the sea, it quickly deposits much of its sediment. The loose boundary (consisting of movable material) of an alluvial channel deforms under the action of flowing water and the deformed bed with its changing roughness (bed forms) interacts with the flow. A dynamic equilibrium state of the boundary may be expected when a steady and uniform flow has developed. The resulting movement of the bed material (Sediment) in the direction of flow is called sediment transport. To transport load a river needs to have energy so when a river losse energy it is forces to deposit its load.

Bed load ranges from a few percent of total load in lowland rivers to perhaps 15% in Mountain rivers to over 60% in some arid catchments. The rate of sediment transport typically increases as a power function of flow, i.e. a doubling of flow typically produces more than doubling in sediment transport occurs during floods. Downstream movement commonly occurs as irregular basis bursts of short-distance movement separated by longer periods, when the particles remain at rest. Because variation in bed load changes, estimating annual bed load rated is a dynamic process involving careful examinations.

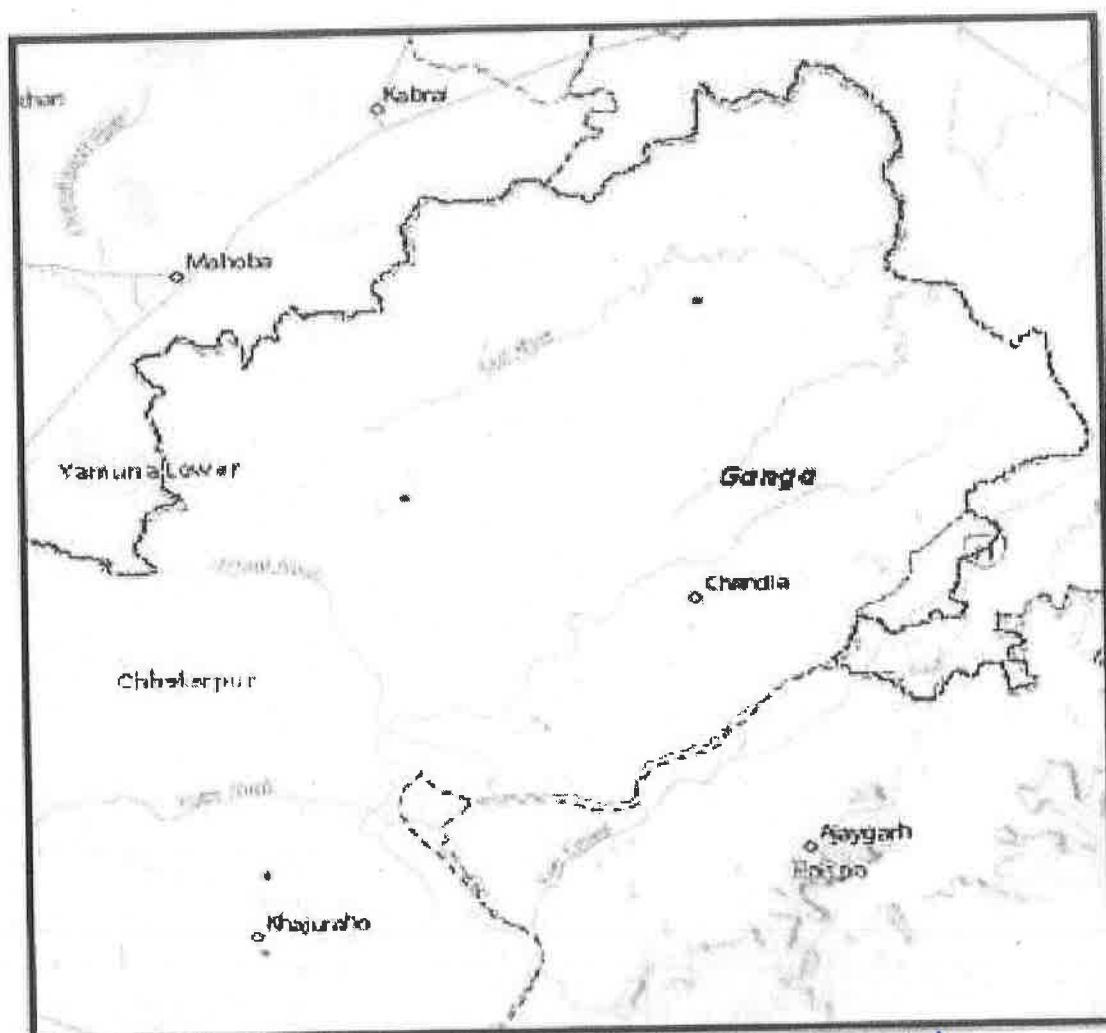
### **THE REPLENISHMENT ESTIMATION METHOD:**

The mineral potential is calculated based on field investigation and geology of the catchment area of the riverstreams. The area of removal of mineral in a river or stream can be decided depending on geomorphology and other factors, it can be 50% to 60% of the area of a particular river/stream. The percent of mineral constituent like boulder, bajri, sand also varies for different rivers / streams. While calculating the mineral potential the percentage of each mineral constituent is as, boulders 35-40%, Bajri 30-35%, Sand 25-30%, and 5-10% for silt and clay where as in Madhya Pradesh

*Lalit*  
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river deposition of boulder 5-10% Bajri 10-15% and sand 75-80% and silt, the quantum of deposition varies from stream to stream depending upon factors like catchment Lithology, discharge, river profile and geomorphology of the river course. There are Certain geomorphological features developed in the river beds such as channel bar, point bar etc. where annual deposition is more even two to three meters. The mined out area of the premonsoon will be completely replenish with sand during monsoon. Hence it is assume that the pits will be replenished after each monsoon.

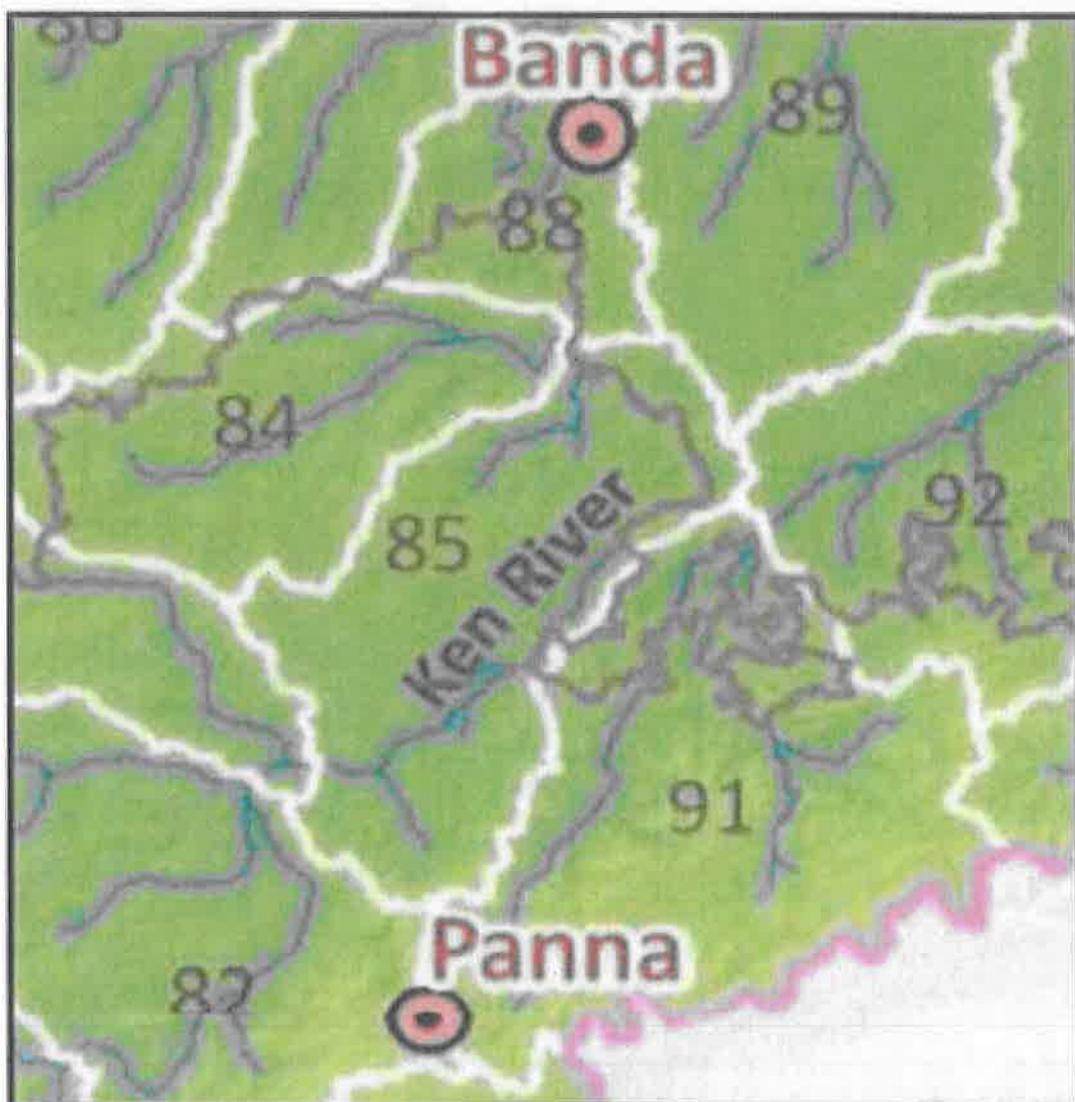
Following are some pictures showing the overview of Ken River:



Brijesh

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The geographical extent of the Yamuna Lower sub-basin lies between  $77^{\circ} 6'$  to  $81^{\circ} 55'$  east longitudes and  $22^{\circ} 51'$  to  $28^{\circ} 1'$  north latitudes of the country. The Sind, the Betwa, the Dhasan, the Ken rivers are the major tributaries in the Yamuna lower sub-basin. The Yamu Lower sub-basin is the largest sub-basin of the Ganga basin with a total catchment area of 1,24,867 Sq.km. The sub-basin majorly covers the states of Uttar Pradesh and Madhya Pradesh. The sub basin map is shown below:



### Conclusion

The sand replenishment in river can be studied by taking aforesaid points, which are dealt in preceding Para's. The frequency and intensity of deposition is variable according to the climatic conditions which prevails in an area, and the piling/ thickness of sand deposition is entirely depend upon the quantity of transportation of detritus material during flood. The drainage basins of these rivers are separated by a water divide. Annually in the monsoon season; due to rain in the nearby areas the sand is flowing along the rainy water and rest at the meanders.

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## (7) General Profile of the District

<b>1. Geographical Position</b>	Laying between north latitudes 24°06' and 25°20' and east longitude 79°59' and 80°26 falls under the survey of India toposheet No. 540, 54P, 63D. The district is bounded by Mohaba district U.P in the north, Panna district, in the east Tikamgarh district in the west and Sagar & Damoh district in the south.
<b>2. Area and Population</b>	<p>I. Geographical Area (Sq.Km)</p> <p>Total Area (Sq.Km): 8616.82 Km<sup>2</sup></p> <p>II. CENSUS 2011</p> <p>I. Population</p> <ul style="list-style-type: none"> <li>a) Total Population: 17,62,375</li> <li>b) Male Population: 9,36,121</li> <li>c) Female Population: 8,26,254</li> </ul> <p>II. Literates</p> <ul style="list-style-type: none"> <li>a) Total Literates: 9,43,033</li> <li>b) Male: 5,72,010</li> <li>c) Female: 3,71,023</li> </ul> <p>III. Main Workers (Census 2011)</p> <ul style="list-style-type: none"> <li>a) Total Workers: 7,51,797</li> <li>b) Male Workers: 4,81,518</li> <li>c) Female Workers: 2,70,279</li> <li>d) Cultivators: 2,58,880</li> <li>e) Agricultural Labourers: 1,30,732</li> </ul>

  
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## District Survey Report: Chhatarpur

	i) Other Workers: 1,48,145 V. Languages Spoken in the District Hindi and Urdu
3. Temperature	Plains – Maximum: 42.3°C Plains – Minimum: 7.1°C
4. Rainfall (In mm)	Normal – South West Monsoon: 963.60 mm Annual Rainfall: 1068.3 mm
5. Agriculture	a) Total Cultivated Area (Ha): 469.3 b) Net Area Sown (Ha): 319.9 c) Area Sown more than once (Ha): 84.8
6. Rivers, Drainage, etc.	Name of the Rivers: Yamuna Sub-basin of Ganga basin, Bharar, Tarper, Siamri, Kabtni and Kutni rivers, Ken and Dhasan
7. Revenue Administrative Divisions	Revenue Divisions: a. Revenue Blocks: 8
8. Local Bodies	a. Corporations: nil b. Municipalities: 3 c. Panchayats: 148

### Census Data 2011

Census Data for year 2011

Description	2011
Actual Population	17,62,375
Male	9,36,121
Female	8,26,254
Population Growth	19.51%
Area Sq. km.	8,687
Density/KM <sup>2</sup>	203
Proportion to population of Madhya Pradesh	2.43%
Sex Ratio (Per 1000)	883
Child Sex Ratio (0-6 Age)	900

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## District Survey Report: Chhatarpur

Average Literacy	63.74
Male Literacy	72.66
Female Literacy	53.59
Total Child Population (0-6 Age)	2,82,794
Male Population (0-6 Age)	1,48,861
Female Population (0-6 Age)	1,33,933
Literates	9,43,033
Male Literates	5,72,010
Female Literates	3,71,023
Child Proportion (0-6 Age)	16.05%
Boys Proportion (0-6 Age)	15.90%
Girls Proportion (0-6 Age)	16.21%

### (8) Land utilization Pattern in the District: Forest, Agricultural, Mining, etc.,

Land use/land cover (LULC) changes are main issues of universal environment change. The Satellite remote sensing data with their monotonous nature have proved to be rather useful in mapping land use/land cover decorations and changes with time. Quantification of such a change is conceivable through GIS techniques even if the subsequent spatial datasets are of dissimilar scales or resolutions. Such studies have helped in considerate the dynamics of human happenings in space and time. Land use refers to man's activities.

The major portal of the district covered by agricultural land that consist 64.75% of total land user pattern area. Followed by second largest area deciduous forest with 18.64% area.

**Land Use Pattern of the Study Area**

Sr. No.	Class	Area (Ha)	Percentage Of Coverage
1	Agricultural Plantation	205.67	0.02%
2	Barren rocky	456.21	0.05%
3	Cropland	561690.84	64.75%
4	Deciduous (Dry/Moist/Thorn)	161713.25	18.64%
5	Fallow land	9186.95	1.06%

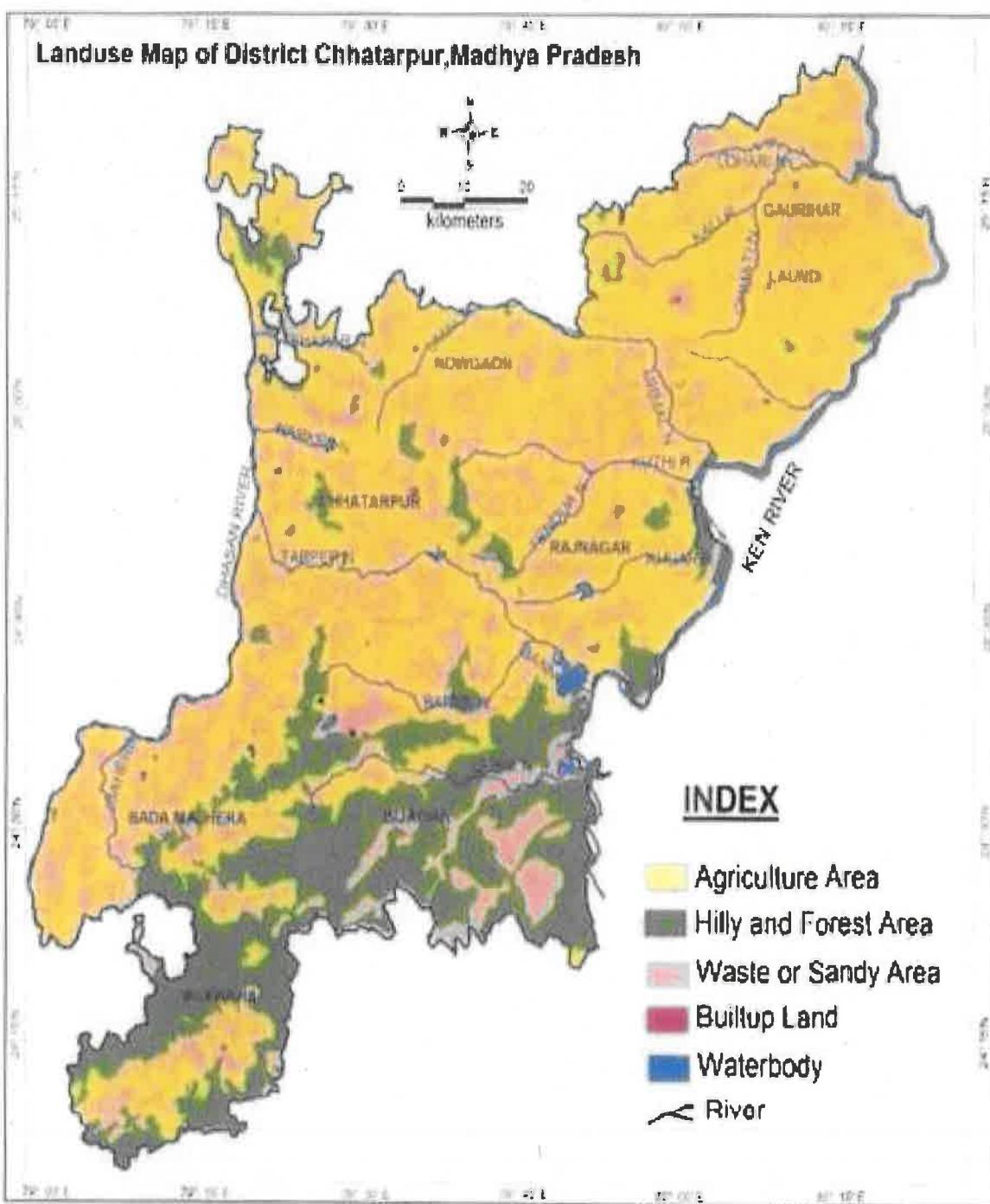
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## District Survey Report: Chhatarpur

6	Forest Plantation	56.69	0.01%
7	Gullied/Ravenous land	3625.06	0.42%
8	Industrial	75.17	0.01%
9	Lake/Ponds	4308.93	0.50%
10	Mining / Quarry	1257.40	0.14%
11	Reservoir/Tank	5333.82	0.61%
12	River	8830.95	1.02%
13	Rural	7322.45	0.84%
14	Scrub Forest	13250.31	1.53%
15	Scrub land	81572.95	9.40%
16	Tree Clad Area	5839.79	0.67%
17	Urban	2721.22	0.31%
	Total	86747.73	100.00%

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## Landuse Map



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## District Survey Report: Chhattarpur

### Land Use Pattern

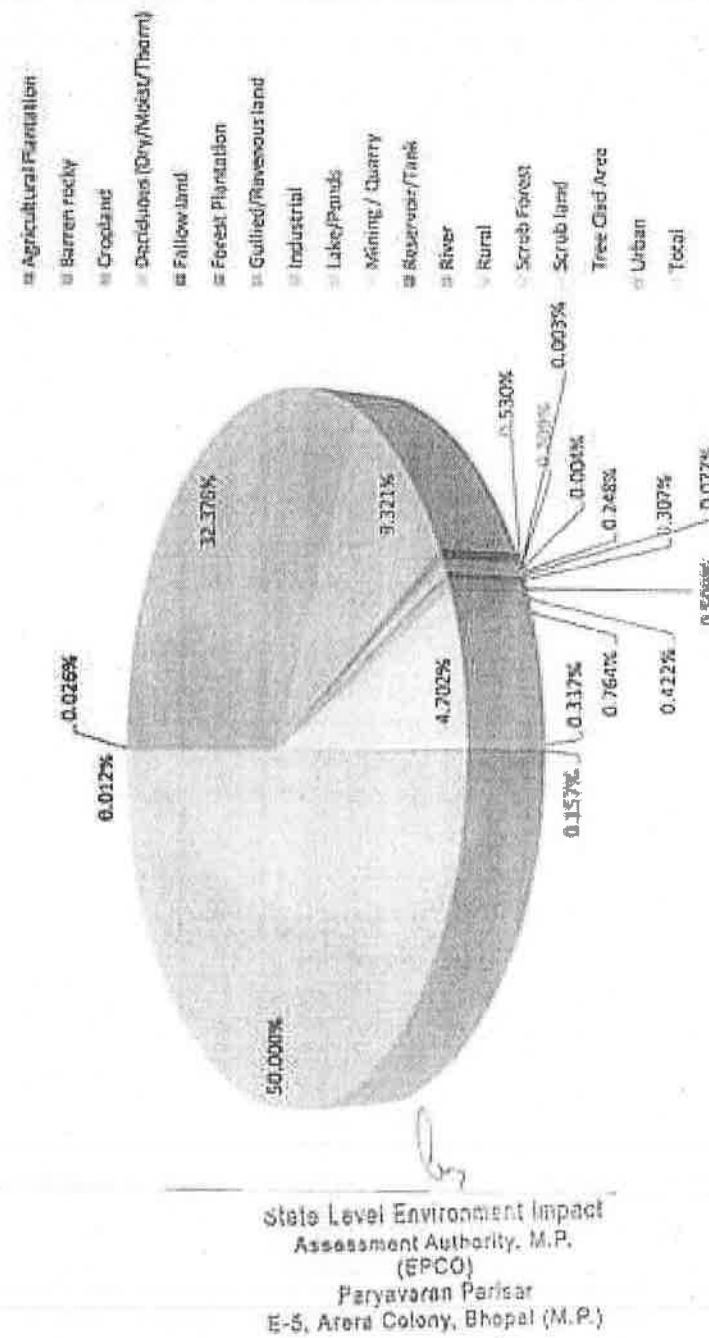


Figure 6 Land Use and Land Cover Breakup of the District

## District Survey Report: Chhatarpur

### (9) Physiography of the District

Chhatarpur district located at 24.06° & 25.20°N 78.59° & 80.26° E respectively. Chhatarpur District is bounded by Uttar Pradesh state to the north, and the Madhya Pradesh districts of Panna to the east, Damoh to the south, Sagar to the southwest, and Tikamgarh to the west. Chhatarpur District is part of Sagar Division.

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## District Survey Report: Chhatarpur

### (10) Details of Month wise Rainfall data of one year

Table 14 Details of Month wise Rainfall Data (June-2021 to March-2022)

Sr No.	Name of Rain Center	Rain on dated 05.04.2022		01.06.2021 to 05.04.2022		Rain of last year 05.04.2021		01.06.2020 to 05.04.2021		Description
		mm	inch	mm	inch	mm	inch	mm	inch	
1	Chhatarpur	0.0	0.00	823.4	12.4	0.0	0.0	799.2	27.9	
2	Luvkashnagar	0.0	0.0	777.0	10.6	0.0	0.0	543.0	21.4	
3	Bijawar	0.0	0.0	667.3	26.3	0.0	0.0	792.0	31.2	
4	Neggaon	0.0	0.0	1065.7	42.0	0.0	0.0	784.2	30.9	
5	Rajpura	0.0	0.0	885.2	34.9	0.0	0.0	870.2	34.3	
6	Gorakhpur	0.0	0.0	950.0	37.4	0.0	0.0	793.0	31.2	
7	Badanpuria	0.0	0.0	1063.8	41.9	0.0	0.0	827.2	32.6	
8	Bulswaria	0.0	0.0	741.2	29.2	0.0	0.0	869.0	34.2	
Total		0.0	0.0	6974.0	274.7	0.0	0.0	6187.8	243.7	
Average Rainfall		0.0	0.0	871.75	34.33	0.0	0.0	773.475	30.46	

  
 Mr. Arvind Kumar Singh  
 Additional Inspector of  
 (WPSO)  
 PWD, Chhatarpur  
 Date: 01/07/2022

# District Survey Report: Chhatarpur

## Rainfall of the District and Climate Conditions

### Rainfall

Chhatarpur District receives maximum rainfall during the south west monsoon. The South west monsoon arrives at the end of June and last till end of September. There are five rain gauge stations in Chhatarpur district namely Chhatarpur, Buxwaha, Bijawar, Rajnagar and Nowgaon. The long term regular rainfall data is available for two stations viz Chhatarpur, and Nowgaon only. On the basis of long term data, the normal rainfall has been worked out. The maximum rainfall received at Bijawar is 1130mm and minimum at Nowgaon is 1028 mm.

About 91 % of the annual rainfall takes place during the south west monsoon i.e., June to September. Only about 2% of the annual rainfall takes place during these winter season from October to February and only about 7% of the annual rainfall takes place during the summer season i.e., March to May. Hence only about 9% of the annual rainfall takes place from October to May. Thus, the surplus water is available only during the south west monsoon. July is the wettest month of the year. About 3% of the annual rainfall takes place during the month of July only.

Recent rainfall data of Chhatarpur and Nowgaon is available from 1976 to 1997. While analysis, the recent year rainfall data, is clear that "Most Severe Drought" conditions have occurred in the last seventeen years. Only once during 1984 in Chhatarpur area and 1979 in Nowgaon area has severe drought conditions were observed. During other years, more than the normal or rainfall within normal range of drought condition was received. Hence Chhatarpur district is not a drought prone district. During the year 1997, Nowgaon Station received more than the normal rainfall while Chhatarpur Station received about 82% of the normal rainfall.

### Climatic Conditions

Chhatarpur district can be classified into three major seasons: Summer, winter and monsoon. The temperature starts rising from the middle of February and reaches maximum during the month of May. The daily maximum temperature during the month of May is around 42.7°C, while annual daily maximum normal temperature is around 32.6° C the day temperature on individual days during the summer season goes up to around 45°C. On the arrival of monsoon at the end of June there is a dip in temperature and weather becomes pleasant. After withdrawal of monsoon early in October, there is slight increase in day temperature. After

## District Survey Report: Chhatarpur

October or from middle of November both the day and night temperature starts falling and lowest temperature recorded in the month of December. The minimum mean normal daily temperature is about 7.5°C, and the annual daily mean normal temperature is about 18.6°C. Sometimes, the minimum temperature drops down to even as low as 1-2°C.

The summer season is the driest period of the year. Hence humidity is also very low during the summer season. The minimum humidity recorded during the month of April/May about 33%. On the arrival of South west monsoon, the humidity increases and highest recorded during the month of August i.e., 85%. The humidity again decreases with withdrawals of monsoon and due to high temperature.

The wind velocity is high during the pre-monsoon period as compared to post monsoon. The highest wind velocity is recorded during the month of June. The mean monthly normal wind velocity during the month of June is around 8.2. The annual average normal wind velocity is around 4.5 Km/hr.



## (11) Geology and Mineral Wealth

### Regional Geology (Source: DRM):

The major part of the district is occupied by Bundelkhand Gneissic Complex comprising a variety of medium to coarse grained granites, migmatites, gneisses etc. They also contain minor enclaves of schist, phyllites, banded hematite quartzite and metabasics. The Bundelkhand Gneissic Complex is traversed by a large number of NE-SW and NW-SE trending quartz reefs and NW-SE trending dolerite dykes, pegmatites and quartz veins. These rocks are overlain by ENE-WSW trending sedimentary sequence of Bijawar Group of rocks in the south-central part of the district. It includes chert breccias and volcanic unit in the lower part, followed by stromatolitic dolomites. Phosphatic and ferruginous units comprising ferruginous breccia, shale, sandstone and conglomerate overlie the dolomites. Vindhyan Supergroup overlies Bijawar Group in the southern and eastern parts and is represented by quartzite/sandstone, limestone, porcellanite, dolomitic limestone and shale belonging to Semri Group; conglomerate, shale, sandstone and quartzite/sandstone of Kaimur Group; shale and sandstone/quartzite of Rewa Group. The Lameta Group of rocks overlies the Rewa sandstone and comprises arenaceous limestone, cherry limestone, grit and clays. Deccan traps overlay the Lametus in the southwestern part of the district.

The Bijawar Group of rocks in the district hosts a variety of mineral resources, which include phosphorite, low silica dolomite, limestone and calc-tuff are mined at several places in the district. Occurrence of diamond is reported from Angor area where occasional diamonds are recovered. Granite is extensively quarried and used as dimension stone for construction purposes. Diaspore, pyrophyllite, red oxide, clays etc. are also being mined locally.

  
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Table: General geological successions of Chhatarpur district

Age	Stratigraphic Status	Lithology	Characteristics
Quaternary		Soil and Alluvium	Soft, Unconsolidated and loose sediments
Upper Cretaceous to Palaeogene		Deccan Trap	Dark grey, fine to medium grained, non to sparsely porphyritic
Cretaceous	Lameta Group	Sandstone/limestone	Brownish,yellowish to buff coloured,medium to coarse grained,friable,calcareous at places
Neo-Proterozoic	Vindhyan Supergroup (Rewa Group)	Sandstone/quartzite Shale	Light reddish brown, hard and massive,fine to medium grained,thickly bedded Dark brown, fine grained, fissile
	Kaimur Group	Quartzite/Sandstone  Sandstone Shale Conglomerate	Fine grained, hard and compact, massive, thickly bedded  Reddish brown, fine grained, massive Reddish brown fine grained soft and fissile Sub-angular to sub-rounded pebbles of varied coloured chert,jasper,quartz and quartzite embedded in a coarse sandy matrix
Meso-Proterozoic	Semri Group	Shale Shale Dolomitic limestone&chert breccia Porcellanite with black carbonaceous shales  Limestone  Quartzite/sandstone	Grey to khaki grey,fine grained soft & splintery Greenish/pinkish grey, fine-grained, soft Greyish blue, fine grained, massive, thinly bedded  Light green, very fine grained, hard and compact rock with thin bands of black carbonaceous shale Dirty grey to grayish blue, fine grained, massive, & thinly laminated Dirty white, fine to medium grained, hard and massive
Palaeo-Proterozoic	Bijawar Group	Shale/quartzite  Dolomitic Limestone  Quartzite	Greyish brown, reddish, soft, and splintery with interbeds of hard ferruginous quartzite Bluish grey, fine grained, hard, massive, and fractured Yellowish grey, fine grained, hard and massive

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		Trap	Greenish Grey, fine grained, hard, compact and foliated
		Chert/breccia	Reddish yellow, fine grained, hard. Compact and fractured
Archaean	Bundelkhand Gneissic Complex	Basic dykes/quartz reefs	Colourless, dirty white, fine grained, hard, massive, dark grey, fine to medium grained, hard and compact
		Granite	Pink, fine grained, massive, hard & compact
		Granite granite	Pink, medium to coarse grained massive rock
		Granite and gneisses	Pink, pinkish grey, porphyritic, foliated and banded rock with enclaves of amphibolites and schist.

  
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In addition to the above, the report shall contain the following:

- (a) District wise detail of river or stream and other sand source;
- (b) District wise availability of sand or gravel or aggregate resource;
- (c) District detail of existing mining leases of sand and aggregates.

Please Refer The Table No. 03 :-

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# District Survey Report: Chhatarpur

## (12) Drainage and Irrigation Pattern

### Drainage Pattern

The District as a whole lies in the Yamuna sub-basin of the Ganga basin. On a localized scale, there is a surface water divide running from South to North past Buxwaha, Rajnagar & Chhatarpur and Landi. The area to the East of this divide, forming almost 70% of the district, is drained by the Ken and to the West by the Dhasan. The Ken is perennial while the Dhasan has ephemeral tendency in major part of its course. Most of the stream traversing in the area has their courses in rocky terrain with almost no alluvium or very thin sand cover even in their channels section, except along the Ken and Bharay where the alluvium is comparatively thicker.

The streams in the area exhibit large variation in the drainage pattern. Whereas, the drainage is uncontrolled in the granitic terrain, lithologically and structurally controlled drainage is observed in the Vindhya, where the streams have carved out their courses in strike alignment through the soft rock unit. Parallel to sub parallel drainage is seen on the dip slope side of the Vindhya and is especially well developed on the Rewa sandstones.

Drainage in the Bijawars is mainly lithologically controlled and the streams have their courses through shales and limestones.

#### The Ken

The Ken flows to the north and Northeast along the eastern boundary of Chhatarpur district. The Northern course of the river has cut a deep gorge across the Panna range of the Vindhyan Mountain. The river bed and the bank expose massive sandstone and shale of the Vindhya, and later the breccias and limestones of the Palkau which Ken flows in the lower plateau composed of Bundelkhand granites and gneisses.

There are several tributaries of the Ken, Sonar, Burail, Shyamari, Kharar, Kutri, Urmil, Lahruk and Koil which join the left bank of the river.

#### The Dhasan

The Dhasan has a northerly course and forms the boundary with Tikamgarh district. It joins the Betwa in Uttar Pradesh. In its early course, the river flows through the Deccan traps and then crosses the Vindhya, Bijawars and Bundelkhand granites before entering the alluvial

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## District Survey Report: Chhatarpur

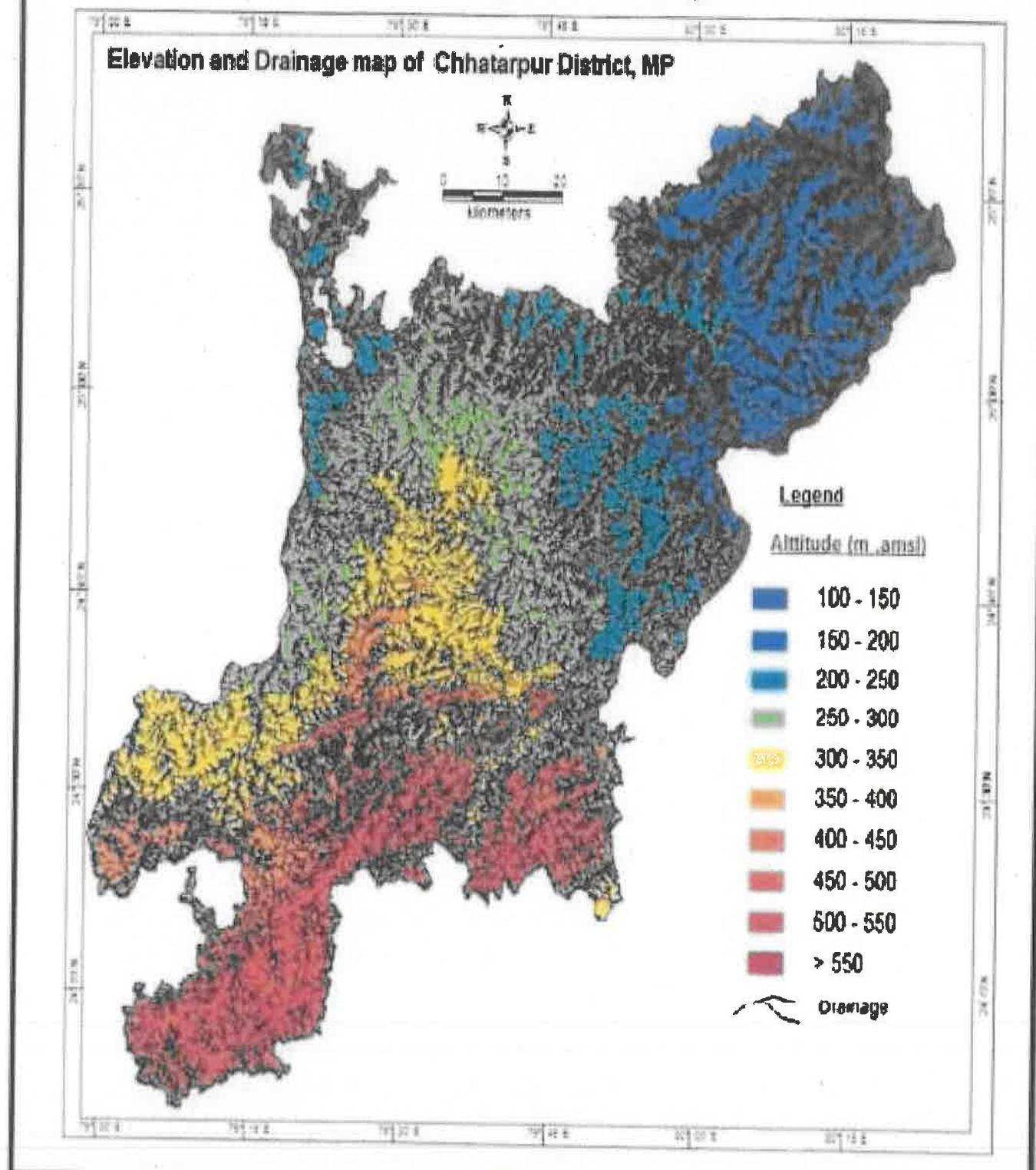
plains. The main tributaries of the Dhasan are - Kather, Majrer, Turper, Sharar which join the river.

### Irrigation Practices

Irrigation is the artificial application of water to the soil for normal growth of plants. Water is an important determinant factor for production of crops in agriculture sector. Intensive and extensive cultivation of land depends mainly on the availability of water. Medium and minor irrigation schemes are implemented in the state for augmenting the water supply for agriculture. The various sources of irrigation are canals, tanks, tube wells, ordinary wells, springs, and channels.

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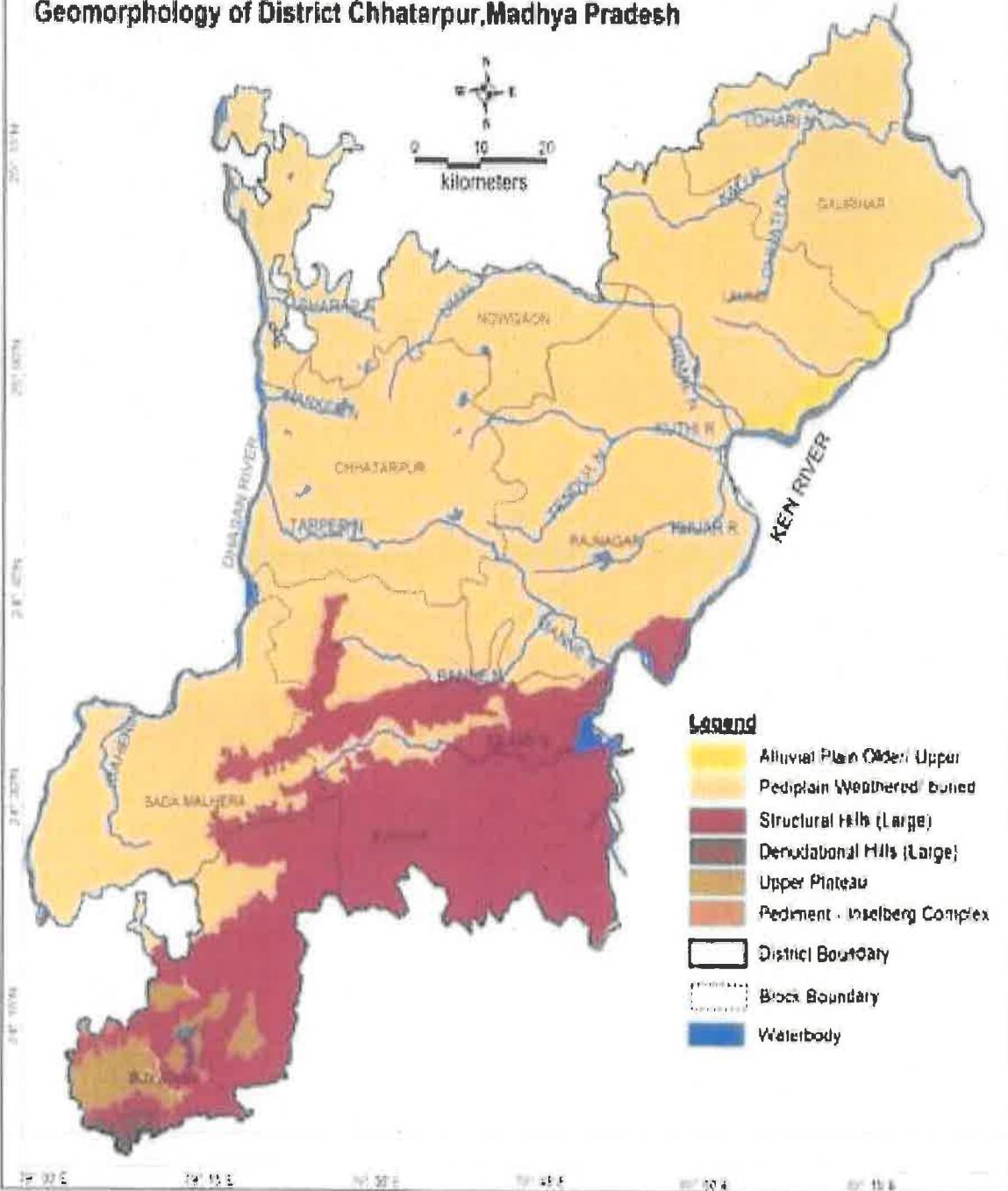
## Digital Elevation Map



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## Geomorphology Map

### Geomorphology of District Chhatarpur, Madhya Pradesh



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## District Survey Report: Chhatarpur

### (13) Surface Water and Ground water scenario of the District

#### Ground Water

Ground Water is found beneath the earth's surface and is an important source of water in most of the Districts in the State. Ground Water is withdrawn for Agriculture, Municipal and Industrial use. The depth at which the ground water is called Ground water Table.

Water level data, including historical data are essential not only for finding out the present ground water conditions but also for forecasting future trends in response to ground water reservoir operations. Using the water level data of 26 monitoring well of Chhatarpur district, Pre and post monsoon depth to water level maps are reproduced. Dynamic ground water resources of the district have been estimated for base year - 2008/09 on block-wise basis. There are eight number of assessment units (block) in the district which fall under non-command (96%) and command (3%) sub units. All blocks of the district in command area are categorized as safe blocks. Bijawar, Gaurihar and Loundi blocks in non-command sub units are safe. Badamnihare, Buxwaha, Chhatarpur, Nowgaon and Rojigarh are under semi critical highest stage of ground water development is computed as 93% for Chhatarpur Block  
Source: Central Ground Water Board -District Report)

#### Surface Water

The district as a whole lies in the Yamuna sub basin of the Ganga basin and traversed by the left bank tributaries of the Ken & the right bank tributaries of the Dhasen. The catchment area of Ken Dhasen rivers falling in the district are 6,033.19 Sq.km and (69.99%) and 2,594.25 Sq. km (30.10%) respectively.

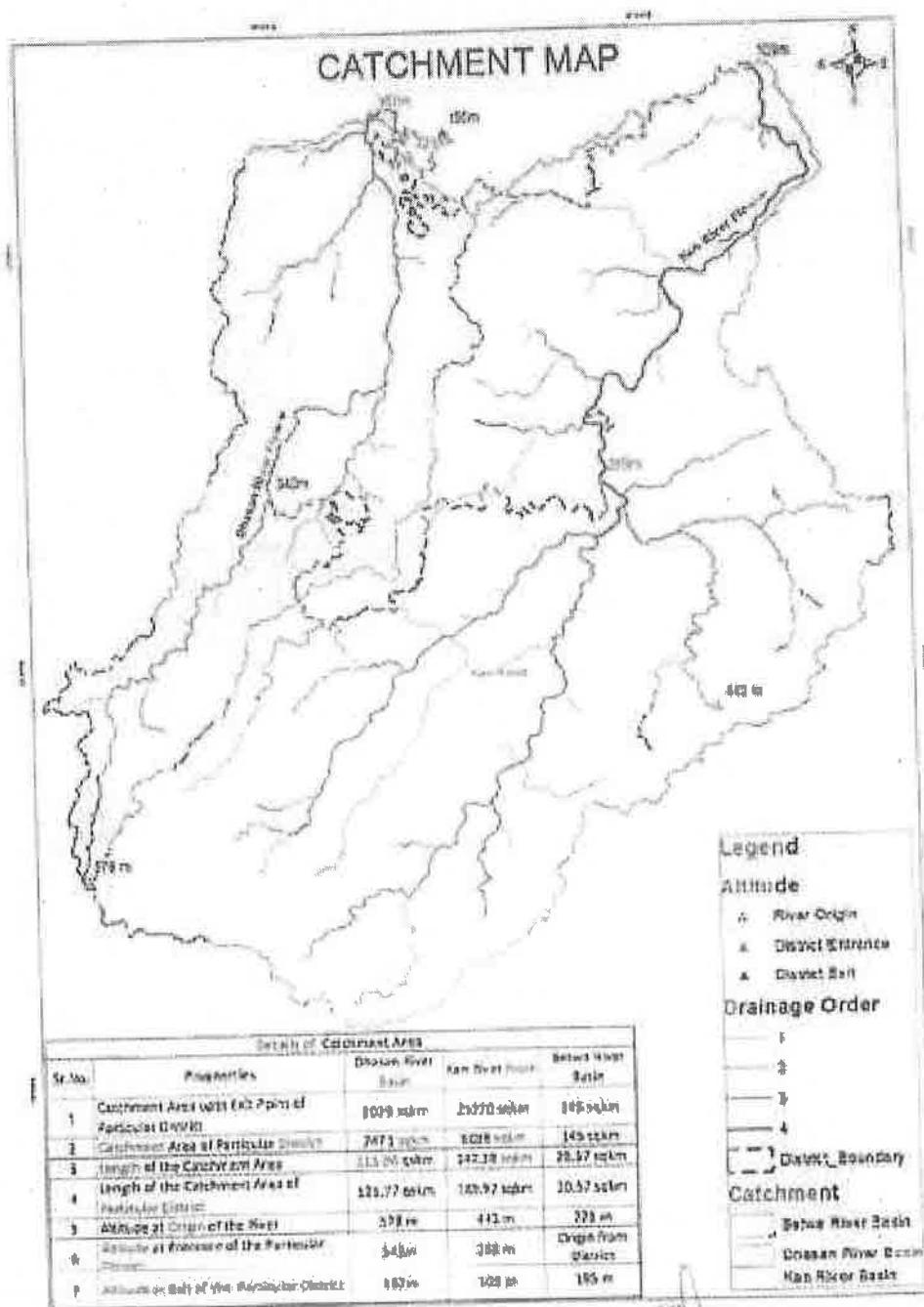
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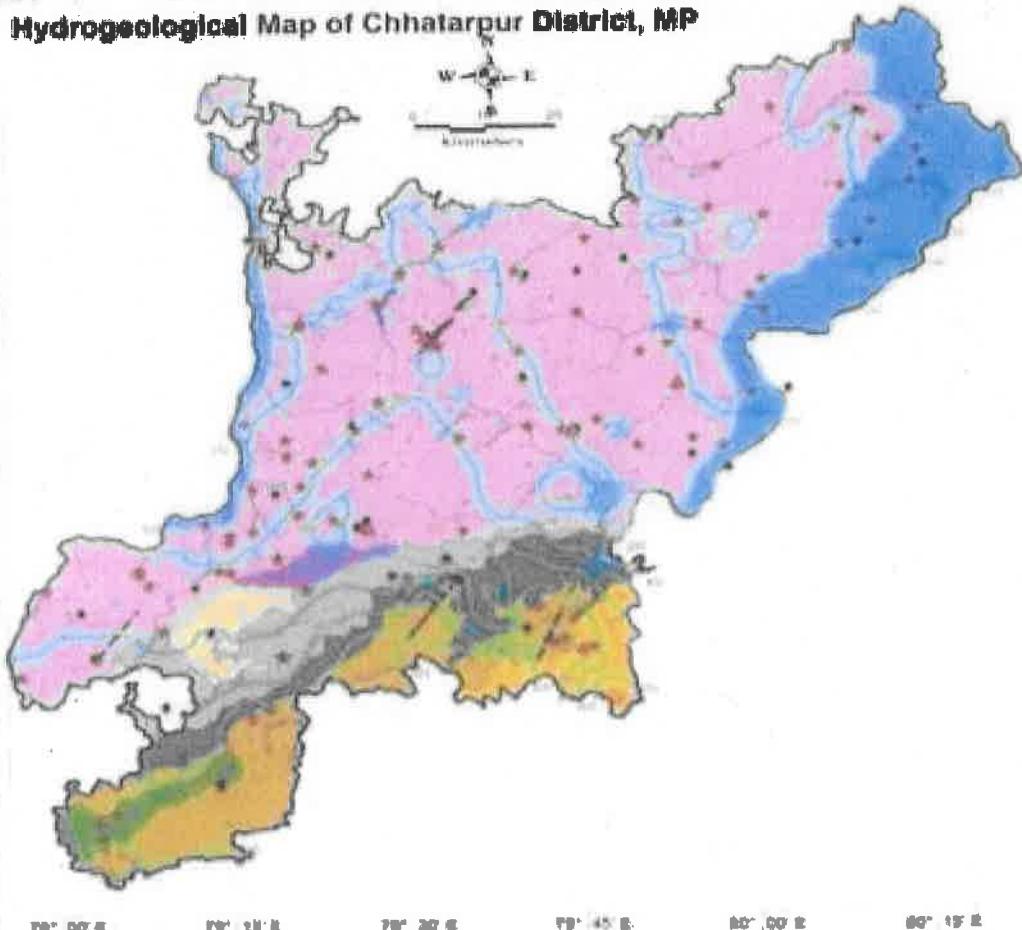
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## Hydrogeology Map

### Hydrogeological Map of Chhatarpur District, MP



### INDEX

Formation	Lithology	Ground Water Potential (DSD)
Alluvium	Sand, Silt and Clay	10 - 15
Dolomite Trap	Lava flows having ground water in secondary porosity	< 3
Mavni Sali (Vindhyan)	Hard compact. Well-jointed sandstone with secondary porosity	< 2
Marmi Sali (Vindhyan)	Hard and with two to three shales	1 - 2
Brahmapatran (Vindhyan)	Sandstone, dolomite and limestone. Fine and medium interbedded with dolomites	2 - 3
Upper Bajuvri	Fragmogenous quartzite, dolomite with angular fragments of quartzite & shale	< 1
Middle Bajuvri	Conglomerate with well developed dolomite cements	1 - 2
Lower Bajuvri	Quartzite - Hard, compact & jointed	2 - 3
Quartz	N.E. (See travelling ridges of quartzite transverse granite boulders)	< 1
Granite	Granite medium to coarse grained highly jointed with weathered portion yielding moderate amount of GW	> 3

■ NHE Locations



Player

● Freshwater



Whelp body



Fault

OWW Player Direction

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## District Survey Report: Chhatarpur

### Details of Catchment Area

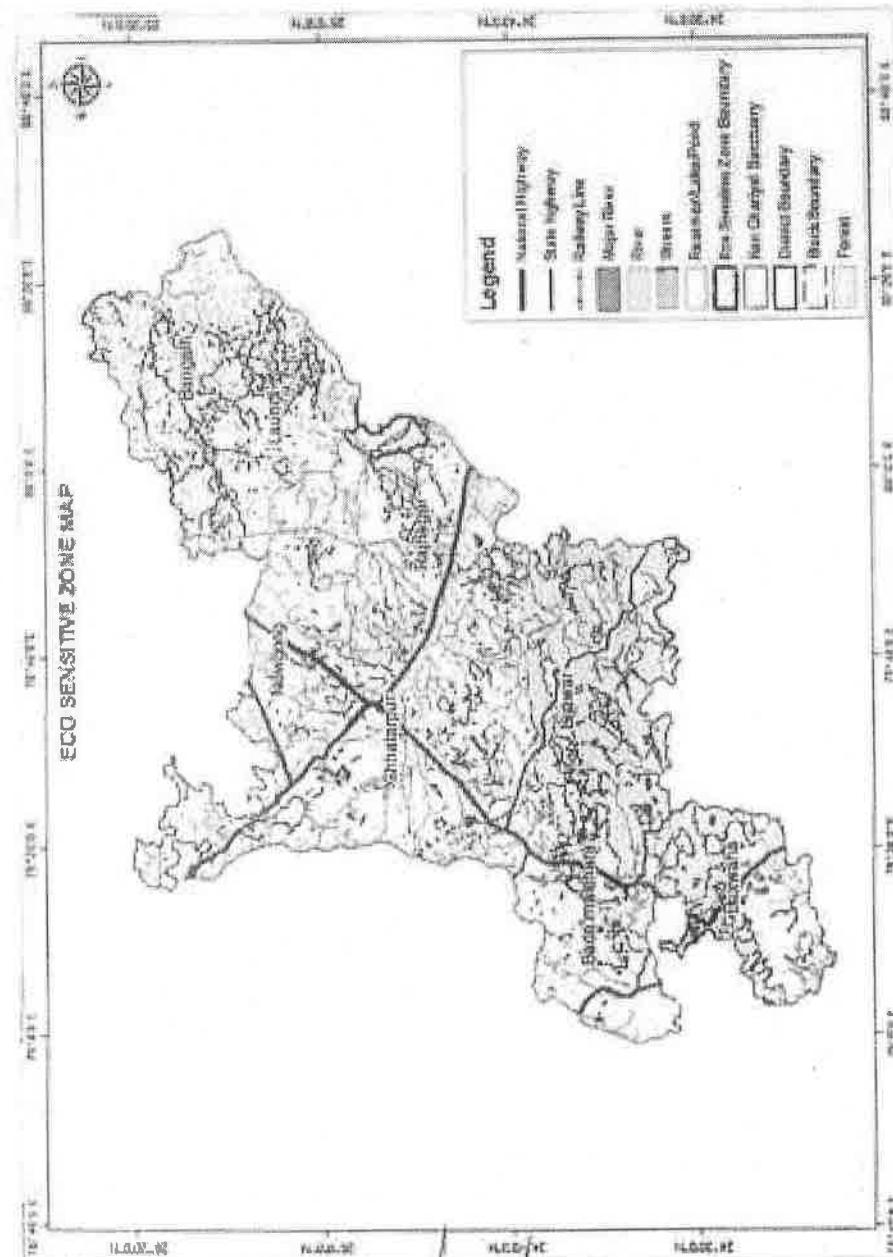
Sr.No.	Properties	Dhasan River Basin	Ken River Basin	Betwa River Basin
1	Catchment Area up to Exit spot of Particular District	9029 sq. km	25270 sq. km	145 sq. km
2	Catchment Area of Particular District	2471 sq. km	6098 sq. km	145 sq. km
3	Length of the Catchment Area	215.86 km	247.38 km	20.57 km
4	Length of the Catchment Area of Particular District	121.77 km	186.92 km	20.57 km
5	Altitude at Origin of the River	578 m	443 m	221 m
6	Altitude at Entrance of the Particular District	342m	269 m	Origin from District
7	Altitude at Exit of the Particular District	167m	109 m	195 m

State

*High*

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## District Survey Report: Chhattarpur



Survey Layer - ECO SENSITIVE ZONE  
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## District Survey Report: Chhatarpur

### (14) Details of Eco – Sensitive Area, if any, in the District

The eco sensitive zone that I suffer threat is the dense and thick forest of Buxwaha. Recently, there have been proposals to demarcate the forest as protected, as the forest is declining rapidly. Diamond mines have been proposed in and near the forests of Buxwaha. Another significant eco sensitive zone is Ken Gharial Wildlife Sanctuary formed for conservation of gharial. Gangau wildlife sanctuary is a mini wildlife sanctuary near Ken River in Chhatarpur. Part of Panna National Park comes under Chhatarpur District. It is conserved for the protection of Tiger. It is also known for deer and antelope.

The biodiversity may severely threatened by negative effects as the aquatic and riparian fauna and flora are not adapted to cope with excessive rates of erosion and sedimentation which might become a regular practice when the mining of sand in river is done.

  
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## **(15) IMPACT ON ENVIRONMENT DUE TO SAND MINING ACTIVITY** **AND MITIGATION MEASURES**

### **1.0 INTRODUCTION**

Environmental Management Plan is a guiding document for environmental impacts associated with the proposed projects. It is a guiding document for management of good environmental condition on the site & surrounding of the proposed sand mine. The Environmental Management Plan (EMP) has been formulated and integrated with the sand mine planning keeping in view overall scientific development of local habitat and the adverse impact that may be caused due to the sand mining operation. The Mining activities are no doubt essential for development & for providing better standard of life. But, there are environmental concerns related to mining activities. In order to maintain the balance in ecosystem, legislations have been enacted, compliance of which would not only allow sustainable development for current needs but also leave options open for the posterity.

A scientific assessment of these impacts those are likely to influence the existing environmental scenario is needed. This could also facilitate in formulating a suitable environmental management plan depicting all mitigation measures. It can help in implementing the project in an eco-friendly manner.

The project activities influencing the following environmental attributes have been studied and their impacts on the following attributes have been assessed.

- Air Environment
- Water Environment
- Land Environment
- Noise Environment
- Biological Environment
- Socio-Economic Environment

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## 2.0 OBJECTIVES

- To ensure that sand extraction will be carried out in an eco friendly manner.
- To reduce the potential impacts of proposed sand mining extraction operations on the stream and riparian habitats of streams, river bank stability etc.
- To provide employment opportunities to the locals
- To restore the ecosystem to the maximum extent possible.
- Mining depth should be restricted to 3 meters and distance from the bank should be  $\frac{1}{4}$ th or river width and should not be less than 7.5 meters

## 3.0 ANTICIPATED IMPACTS AND MITIGATION MEASURES

The pollution potential of the proposed project, its possible impacts on the surrounding environment during pre-operational and operational phases and the necessary management actions proposed for control and abatement of pollution are furnished hereunder.

### AIR ENVIRONMENT

Anticipated impacts-

#### (A) Due to Haul road/ Access Road

Plying of trucks from public road to river sand collection points needs access roads. Majority of such access roads are the same existing roads/tracks being used by pedestrians/cart owners. Movement of heavy vehicles sometimes causes problems to cattle post, agriculture land, and human, habitations due to dust, noise and movement of public. These environmental problems are felt more as the area is rural in nature.

#### (B) Due to Mining process

Air pollution is likely to be caused at various stages of sand mining operations such as excavation, loading of material. Most of the dust will be generated from loading. This dust becomes air borne and gets carried away to surrounding areas. The impact on air is mainly localized in nature as the dust particles are not carried to longer distances and the effect is felt within the core zone of the project involving active Sand mining operations.

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#### Mitigation Measures-

(A) Movement of the vehicles on the road will be increased; however, unmetalled road in the mining area will be sprinkled with water at regular intervals. In addition to prevent spillage by trucks over loading should be controlled along with speed limit. Water will be sprinkled on regular basis to control the dust generation.

#### (B) For Fugitive Dust Emission:

- To avoid fugitive dust emissions at the time of excavation, regular sprinkling of water will be done on regular basis.
- Sand is transported to the sites by road through trucks covered by tarpaulin sheets.
- To minimize the vehicular pollution from the sand transporting vehicles, the following conditions are insisted to permit the vehicles of the transporters:
- The vehicles should have pollution control certificate (PUC) issued by appropriate authorities.
- Regular maintenance of transport vehicles and monitoring of vehicular emission levels at periodical intervals.
- Green belt development along the haul roads, which will act as pollution sink.

#### WATER ENVIRONMENT

##### Anticipated impacts-

As the project activity is carried out in the dry part of river bed, none of the project activities will affect the water environment or riverine habitats. Project activities will not have any adverse effect on the physical components of the environment and therefore may not have any effect on the charge of ground waters or affect the water quality. Monitoring of water quality will be checked yearly.

##### Mitigation measures

- Mining is avoided during the monsoon season and at the time of floods. This will help in replenishment of sand in the river bed.

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- Mining below subterranean water level will be avoided as safe guard against environmental contamination and over exploitation of resources.
- River stream will not be diverted to form in active channels.
- Utmost care will be taken to minimize or control leakage vehicles to be used for sand transportation.
- The washing of trucks in the river will be avoided.
- The contractor will follow all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.

## LAND ENVIRONMENT

The type of mining and the characteristics of the particular mineral deposit both affect the degree to which mining disturbs the landscape. Sand Mining and allied activities will be done in the fluvial plain formed by river meandering. Mining of sand may cause a few environmental degradations.

### Anticipated impacts:

- Damage of river bank due to access ramps to river bed, may cause soil erosion.
- Destruction of river bank hinterland and ecological due to extraction of sand by probability of damage to the flood control bunds (built along the river side) due to heavy movements of vehicles over the bund to approach the mine area and further during transportation for sand from the mine area.
- Disposal of packing material, carried by the workers, would not be allowed. This packing material would include used sachet/ gulkha /pan masala pouches.
- Movement of heavy vehicles sometimes cause problems to agricultural land, human habitations, borehole users due to dust, noise and it also causes traffic hazards.
- Surface degradation due to road network.

#### Mitigation measures:

- Safety distance will be left from both the bank of the river. (As guided by, MOEFCC guidelines on "Sustainable sand mining guidelines" & Geological Survey of India).
- No foreign material like polythene bag, jute bag and useless articles should be allowed to remain/spill in river bed and catchment area, or no pits/pockets will be allowed to be filled with such material.
- Minimum number of access roads to river bed for which cutting of river banks will be avoided and ramps are to be maintained.
- Care will be taken to ensure that ponding is not formed in the river bed.
- Mining will not exceeds beyond the allowed extraction capacity.
- Green belt will be developed along the haul road and the bank of rivers of mine premises and near the sand mining site. While selecting the plant species, preference will be given for planting native species of the area.

#### NOISE ENVIRONMENT

##### Anticipated impacts

Noise environment in this project will be affected only by the equipment at the site and vehicular transportation. Since, slight increase in noise levels can be expected.

##### Mitigation measures

- Minimum use of Horns at the village area,
- Timely maintenance of vehicles and their silencers to minimize vibration and Sound.
- Phasing out of old and worn out trucks.
- Provision of green belts along the road networks.
- Care will be taken to produce minimum sound during sand loading.
- Use of Backhoe and ear plugs may be provided to protect the labors working at the site.

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## BIOLOGICAL ENVIRONMENT

Anticipated impacts:

a) Aquatic environment

Proposed mining will not have any possibility of disturbance of aquatic life as it is a dry bed.

b) Flora and Fauna

The mining activity will have insignificant affect on the existing flora and fauna. The project area is surrounded with agricultural land. It was found that the sand mining activity will not have any significant impact on the biological environment of the region.

Mitigation measures

- Improvement in river bank stability.
- Large woody debris in the riparian zone will be left undisturbed or replaced when moved and not be burnt.
- Vegetative debris will not be stored within the mine lease area.
- Operation and storage of heavy vehicles within riparian habitat will be restricted.
- Covering of loaded vehicles to reduce dust emission, which may harm surrounding agricultural crops and other plant species.
- Conservation of biological diversity of plants, birds and animals.
- Greenbelt Development and Bio-Diversity Preservation.
- Plantation activities will be carried out at the bank of the river and along the haul roads.
- This activity will help for maintaining ecology and environment of the area.

## GREENBELT DEVELOPMENT

- The implementation for development of green belt will be of paramount importance as it will not only add up as an aesthetic feature, but also act as a pollution sink.
- The species to be grown in the area should be dust tolerant and fast growing species so that permanent green belt is created.

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Bhopal (M.P.)  
E.S.I. No. 100001

- To stabilize the river bank erosion the plantation of native species of that area along the river bank.
- Apart from the green belt and aesthetic plantation for elimination fugitive of emission and noise control, all other plantation efforts shall be decided and executed with the assistance and co-operation of the local community.

The following species may be considered primarily for plantation best suited for the prevailing climatic condition in the area:

- Neem (*Azadirachta indica*)
- Sissoo (*Dalbergia sissoo*)
- Mango (*Mangifera indica*)
- Peepal (*Ficus religiosa*)
- Bargad (*Ficus benghalensis*)
- Chirol (*Holoptelea integrifolia*)
- Karanj (*Millettia pinnata*)
- Khrim (*Manilkara hexandra*)
- Amaltas (*Cassia fistula*)
- Jungle Jalebi (*Pithecellobium dulce*)
- Amla (*Phyllanthus emblica*)
- Bel (*Aegle marmelos*)

#### SOCIO-ECONOMIC ENVIRONMENT

- Social welfare program like provision of medical facilities educational facilities, water supply for the employees as well as for nearby villagers will be taken.
- A well laid plan for employment of the local people has been prepared by giving priority to local people.
- Supplementing Govt. efforts in health monitoring camps, social welfare and various awareness programs among the rural population.
- Assisting social forestry program.

- Adoption of villages for general development.
- Development of facilities within villages like roads, etc.
- The management will contribute for the overall economy and social development of the area.
- In the recruitment process of the organization, local people will be given preference.

#### Anticipated impacts and evaluation:

The project activities shall not have any adverse impacts on any of the common property resources of the village communities, as the sand mine lease area is not being used for any purpose by any section of the society in this region. There is no R & R involvement in this project. There is no land acquisition in this project.

- The results of the field survey conducted to understand the knowledge and perception of the people living around the project area gives a clear idea about the need for the project.
- A major portion of the houses in the study area are semi-pucca type structures. The water source to these areas is from the municipal connection and private bore wells and wells. The awareness level regarding the proposed mining activity is very high.
- The proposed mining activity is expected to provide stimulus to socio-economic activities in the region and thereby accelerate further development processes.

*L. Singh*  
State Level Environment Impact  
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Paryavaran Parishar  
E-5, Arera Colony, Bhopal (M.P.)

**Sand Mining Area details based on Pre Monsoon**

<b>SL. No</b>	<b>Name of Mines</b>	<b>Total Area in Sq.M.</b>	<b>Depth in meters</b>	<b>Sand Mines Quantity cubic meters</b>
1	रामपुर	31000	2.5	77,500
2	पखार-1	100000	2.5	2,50,000
3	गवईधाट-1	140000	2.5	3,50,000
4	बज्जा	39900	2.5	99750
5	रेपना	21500	2.5	53750
6	परेई-1	50000	2.5	1,25,000
7	पतवार-2	60000	2.5	1,50,000
8	गवईधाट-2	70000	2.5	1,75,000
9	परेई-2	100000	2.5	2,50,000
10	रामपुरधाट	40000	2.5	1,00,000
11	चारबंद-3	40000	2.5	1,00,000
12	कन्देला	15000	2.5	37500
13	गोयरा-1	40000	2.5	1,00,000
14	चारीखेड़ा	100000	2.5	2,50,000
15	महमाया	40000	2.5	1,00,000
16	अजीतपुर	40000	2.5	1,00,000
17	चारबंद-4	100000	2.5	2,50,000
18	गोयरा-2	100000	2.5	2,50,000

19	फतेहपुर	20000	2.5	50,000
20	धोरारामा खदान	52000	2.5	1,30,000
21	नेहरा	140000	2.5	3,50,000
22	बालवंद नं० 1	120000	2.5	3,00,000
23	बालवंद नं० 2	120000	2.5	3,00,000
24	लरामख्या	126000	2.5	3,15,000
25	चंजारी	123000	2.5	3,07,500
26	हर्ष	125000	2.5	3,12,500
27	बघारी-1	115000	2.5	2,87,500
28	सूरजपुर	40000	2.5	1,00,000
29	डिनौला	40000	2.5	1,00,000
30	सकुकर	40000	2.5	1,00,000
31	धथारी नं० 2	80000	2.5	2,00,000
32	झुस	28000	2.5	70,000
33	डिगोनी	40000	2.5	1,00,000
34	कुरेला	40000	2.5	1,00,000
35	झुटिया	21000	2.5	52,500
36	बगमऊ	42000	2.5	1,05,000
37	चारामंज	70000	2.5	1,75,000
38	टीला-2	60000	2.5	1,50,000
39	अलीपुरा-2	70000	2.5	1,75,000

  
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 (EPAO)  
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 E-5, Arera Colony, Bhopal (M.P.)  
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40	टीला-१	40000	2.5	1,00,000
41	अलीपुरा-१	40000	2.5	1,00,000
42	मौरा (सिंजयगढ़)	35200	2.5	88000
43	नारायणपुरा	20000	2.5	50000
44	सिंग्रामपुरा	20000	2.5	50000
45	अमरपुरा	15000	2.5	37500
46	दिवोल	25000	2.5	62500
47	रामपुर (कुरी)	14000	2.5	35000
48	कवारी	15000	2.5	37500
Total Area		28,63,600	Total Volume	71,59,000

  
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 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parishar  
 E-5, Arera Colony, Bhopal (M.P.)

Sand Mining Area details based on Post Monsoon				
SL. No	Name of Mines	Total Area in Sq.M.	Standard Depth in meters	Sand Mines Quantity cubic meters
1	रामपुर	31000	3	93000
2	पठवार-1	100000	3	3,00,000
3	मध्यभाट-1	140000	3	4,20,000
4	बस्ता	39900	3	1,19,700
5	खेना	21500	3	64,500
6	परेंद-1	50000	3	1,50,000
7	पठवार-2	60000	3	1,80,000
8	मध्यभाट-2	70000	3	2,10,000
9	परेंद-2	100000	3	3,00,000
10	रामपुरभाट	40000	3	1,20,000
11	बारवंद-3	40000	3	1,20,000
12	फन्देला	15000	3	45,000
13	गोयरा-1	40000	3	1,20,000
14	बारीखेड़ा	100000	3	3,00,000
15	महवाया	40000	3	1,20,000
16	जगीतपुर	40000	3	1,20,000
17	बारवंद-4	100000	3	3,00,000

18	गोमरा-2	100000	3	3,00,000
19	पश्चिमपुर	20000	3	60,000
20	धीरारारेत खदान	52000	3	1,56,000
21	नेहरा	140000	3	4,20,000
22	चारखंद नं० 1	120000	3	3,60,000
23	चारखंद नं० 2	120000	3	3,60,000
24	लसगरसा	126000	3	3,78,000
25	बंजारी	123000	3	3,69,000
26	हरई	125000	3	3,75,000
27	बंधारी-1	115000	3	3,45,500
28	सूरजपुर	40000	3	1,20,000
29	हिनौता	40000	3	1,20,000
30	संसकर	40000	3	1,20,000
31	बंधारी नं० 2	80000	3	2,40,000
32	सुरा	28000	3	84,000
33	डिगीनी	40000	3	1,20,000
34	फुरेला	40000	3	1,20,000
35	कुटिया	21000	3	63,000
36	बगल	42000	3	1,26,000
37	करारार्ज	70000	3	2,10,000

38	टीला-2	60000	3	1,80,000
39	अलीपुरा-2	70000	3	2,10,000
40	टीला-1	40000	3	1,20,000
41	अलीपुरा-1	40000	3	1,20,000
42	मीरा (सिंजवाला)	35200	3	1,05,600
43	नारायणपुरा	20000	3	60,000
44	सिंधामपुरा	20000	3	60,000
45	अमरपुरा	15000	3	45,000
46	दिदोल	25000	3	75,000
47	राजपुर (कुर्ची)	14000	3	42,000
48	कदारी	15000	3	45,000
Total Area		2863600	Total Volume	85,90,800

  
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 E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhattarpur

### Drainage System with description of main Rivers

S. NO.	Name of the River	Area Drained (Sq. Km.)	Area Drained in the District (Sq. Km.)	Percentage of Area Drained in the District
1	Ken River	25270	6098	24 % (approx)
2	Dhasan River	9029	2471	27 % (approx)

### Salient Features of Important Rivers and Streams

S. NO.	Name of the River or Stream	Total Length in the District (in km)	Place of Origin	Altitude at origin
1	Ken River	186.92	near the Village Ahirgawan in Jabalpur	550 m
2	Dhasan River	121.77	Begumganj, Raisen	578 m

*State Level Environmental Impact Assessment  
M.P.*

## District Survey Report: Chhatarpur

S. L. N. o	Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometers)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in m <sup>2</sup> ) Area (rounded) x Depth	Total Sand Potential in m <sup>3</sup> Area x Depth =Volume	Mineable mineral potential (in m <sup>3</sup> (60% of total mineral potential) = Volume x 60/100
1	Kail River Village – Rampur Khasra No. – 306/1	0.42	73.8095	31000 x 3	93000	55800
2	Ken River Village – Padwar Khasra No. – 1540/1	0.84	119.048	100000 x 3	3,00,000	180000
3	Ken River Village – Mawaighat Khasra No. – 396/2	1.08	129.63	140000 x 3	4,20,000	252000
4	Ken River Village – Barua Khasra No. - 609	0.30	133	39900 x 3	1,19,700	71820
5	Kail River Village – Revana Khasra No. – 1298/1	0.35	61.4285	21500 x 3	64,500	38700
6	Ken River Village – Parei Khasra No. – 613/1	0.38	131.579	50000 x 3	1,50,000	90000
7	Ken River Village – Padwar Khasra No. – 1540/1	0.51	117.547	60000 x 3	1,80,000	108000

*State Level Environment Impact*

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Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

*[Signature]*

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6	Ken River Village – Marwaighat Khasra No. - 39	0.620	112.9032	70000 x 3	2,10,000	126000
7	Ken River Village – Parej Khasra No. - 561	0.55	181.819	100000 x 3	3,00,000	180000
8	Ken River Village – Rampurghat Khasra No. - 2	0.20	200	40000 x 3	1,20,000	72000
9	Ken River Village – Barbandh Khasra No. - 472/2	0.29	137.931	40000 x 3	1,20,000	72000
10	Ken River Village – Kandela Khasra No. - 48	0.20	75	15000 x 3	45,000	27000
11	Ken River Village – Goyra Khasra No. - 2531/13	0.29	137.931	40000 x 3	1,20,000	72000
12	Ken River Village – Barikheda Khasra No. - 269/231	0.63	158.7301	100000 x 3	3,00,000	180000
13	Ken River Village – Mahwaya Khasra No. - 1163	0.22	181.818	40000 x 3	1,20,000	72000
14	Ken River Village – Ajeetpur Khasra No. - 656	0.181	220.9945	40000 x 3	1,20,000	72000
15						
16						

## District Survey Report: Chhatarpur

17	Ken River Village – Barbandh Khasra No. – 472/2	0.68	147.059	100000 x 3	3,00,000	180000
18	Ken River Village – Goyra Khasra No. – 2531/13	0.43	232.559	100000 x 3	3,00,000	180000
19	Ken River Village – Fatehpur Khasra No. – 2/2	0.21	95.238	20000 x 3	60,000	36000
20	Ken River Village – Dhuara Khasra No. – 332	0.35	148.5715	52000 x 3	1,56,000	93600
21	Ken River Village – Nehra Khasra No. – 697/1	1.48	94.5945	140000 x 3	4,20,000	2,52,000
22	Ken River Village – Barbandh Khasra No. – 472/2	0.78	153.846	120000 x 3	3,60,000	2,16,000
23	Ken River Village – Barbandh Khasra No. – 472/2	0.78	153.846	120000 x 3	3,60,000	2,16,000
24	Ken River Village – Lasgarya Khasra No. – 405	0.91	138.461	126000 x 3	3,78,000	2,26,800

State Level Environment Impact  
Assessment Authority (EPCA)

Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

District Survey Report: Chhatarpur

25	Ken River Village – Banjari Khasra No. – 730	0.98	125.51	123000 x 3	3,69,000	2,21,400
26	Ken River Village – Hantai Khasra No. – 277/1	0.85	147.059	125000 x 3	3,75,000	2,25,000
27	Ken River Village – Baghari Khasra No. – 854	0.95	121.053	115000 x 3	3,45,500	2,07,000
28	Urmil River Village – Surajpur Khasra No. – 818	0.91	43.956	40000 x 3	1,20,000	72000
29	Ken River Village – Hinauta Khasra No. – 495/2	0.30	133.3334	40000 x 3	1,20,000	72000
30	Ken River Village – Sadkar Khasra No. – 1400	0.35	114.2856	40000 x 3	1,20,000	72000
31	Ken River Village – Baghari Khasra No. – 854	0.71	112.676	80000 x 3	2,40,000	1,44,000
32	Urmil River Village – Sura Khasra No. – 257	0.78	35.8974	28000 x 3	84,000	50400
33	Urmil River Village – Digauni Khasra No. – 917,1011	0.88	45.4545	40000 x 3	1,20,000	72000

## District Survey Report: Chhattarpur

34	Urmil River Village – Kurela Khasra No. – 2/1011	0.87	45.977	400000 x 3	1,20,000	72000
35	Banne River Village – Kutia Khasra No. – 1	0.71	29.5774	21000 x 3	63,000	37800
36	Urmil River Village – Bagmau Khasra No. – 1063	0.93	45.1613	42000 x 3	1,26,000	75600
37	Dhasan River Village – Kararaganj Khasra No. – 1	0.76	92.1053	70000 x 3	2,10,000	1,26,000
38	Dhasan River Village – Tila Khasra No. – 574	0.55	109.0909	60000 x 3	1,80,000	108000
39	Dhasan River Village – Alipura Khasra No. – 2113	0.58	120.5896	70000 x 3	2,10,000	1,26,000
40	Dhasan River Village – Tila Khasra No. – 574	0.44	90.909	40000 x 3	1,20,000	72000
41	Dhasan River Village – Alipura Khasra No. – 2113	0.32	125	40000 x 3	1,20,000	72000

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(EPCO)

Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

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42	Kathan River Village - Morta (Sijwaha) Khasra No. - 128	0.97	36.2887	35200 x 3	1,05,600	63360
43	Banne River Village - Narayanpura Khasra No. - 189,658	0.74	27.027	20000 x 3	60,000	36000
44	Banne River Village - Singrampura Khasra No. - 53,369	0.86	23.2558	20000 x 3	60,000	36000
45	Banne River Village - Amarpura Khasra No. - 332	0.50	30	15000 x 3	45,000	27000
46	Tarper River Village - Diddol Khasra No. - 818	0.40	62.5	25000 x 3	75,000	45000
47	Tarper River Village - Rampur (Kurra) Khasra No. - 701	0.69	20.2899	14000 x 3	42,000	27000
Burha Nala Village - Kadari Khasra No. - 672		0.93	16.129	15000 x 3	45,000	
<b>Total</b> (Approx)		<b>29.641</b>	<b>191.9</b> <b>(Approx)</b>	<b>2863600 x 3</b>	<b>8590800</b>	<b>5154480</b>

State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCA)  
 E-5, Arera Colony, Parivar  
 Paryavaran Parivar  
 Bhopal (M.P.)

## District Survey Report: Chhatarpur

**Table No. 27 SAND MINEABLE MINERAL POTENTIAL DATA 60%**

S. L. N. o	Name of Mines	Total Area In Sq.M.	Standard Depth in meters	Sand Mines Quantity cubic meters	Mineable mineral potential (in m <sup>3</sup> ) % of total mineral potential)	Name of River
1	रामपुर	31000	3	93000	55800	Kali River
2	पड़वार-1	100000	3	3,00,000	180000	Ken River
3	मन्दिरधाट- 1	140000	3	4,20,000	252000	Ken River
4	बरकुआ	39900	3	1,19,700	71820	Ken River
5	रेवना	21500	3	64,500	38700	Kali River
6	परेह-1	50000	3	1,50,000	90000	Ken River
7	पड़वार-2	60000	3	1,80,000	108000	Ken River
8	मन्दिरधाट- 2	70000	3	2,10,000	126000	Ken River
9	परेह-2	100000	3	3,00,000	180000	Ken River
10	रामपुरधाट	40000	3	1,20,000	72000	Ken River
11	चारखद-3	40000	3	1,20,000	72000	Ken River
12	कन्देला	15000	3	45,000	27000	Ken River
13	गोधरा-1	40000	3	1,20,000	72000	Ken River
14	बारीसेत्ता	100000	3	3,00,000	180000	Ken River

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15	महवाया	40000	3	1,20,000	72000	Ken River
16	अजीतपुर	40000	3	1,20,000	72000	Ken River
17	बारबंद—४	100000	3	3,00,000	180000	Ken River
18	गोपसा—२	100000	3	3,00,000	180000	Ken River
19	फतेहपुर	20000	3	60,000	36000	Ken River
20	धीशरामेत खदान	52000	3	1,56,000	93600	Ken River
21	नेहरा	140000	3	4,20,000	2,52,000	Ken River
22	बारबंद नं० १	120000	3	3,60,000	2,16,000	Ken River
23	बारबंद नं० २	120000	3	3,60,000	2,16,000	Ken River
24	लसगारया	126000	3	3,78,000	2,26,800	Ken River
25	बजारी	123000	3	3,69,000	2,21,400	Ken River
26	हरई	125000	3	3,75,000	2,25,000	Ken River
27	बधारी—१	115000	3	3,45,500	2,07,000	Ken River
28	सूरजपुर	40000	3	1,20,000	72000	Urmil River
29	हिनोता	40000	3	1,20,000	72000	Ken River
30	साइकर	40000	3	1,20,000	72000	Ken River
31	बधारी नं० २	80000	3	2,40,000	1,44,000	Ken River

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Assessment Authority, M.P.  
(EPCO)**

## District Survey Report: Chhatarpur

				84,000			50400		Urmil River
32	चुरा	28000	3	1,20,000			72000		
33	दिगोनी	40000	3	1,20,000			72000		
34	कोइला	40000	3	1,20,000			72000		
35	कुटिया	21000	3	63,000			37800		
36	माथक	42000	3	1,26,000			75600		
37	करारगांज	70000	3	2,10,000			1,26,000		
38	टैला-2	60000	3	1,80,000			108000		
39	अलीपुरा-						1,26,000		
	2	70000	3	2,10,000					
40	टैला-1	40000	3	1,20,000			72000		
41	अलीपुरा-						72000		
	1	40000	3	1,20,000					
42	मोरा (सिंजवाहा)	35200	3	1,05,600			63360		
43	नारायणपुर	20000	3	60,000			36000		
44	सिंधमपुरा	20000	3	60,000			36000		
45	अनरंगा	15000	3	45,000			27000		
46	दिदोल	25000	3	75,000			45000		
47	रामपुर (कुरा)	14000	3	42,000			25200		
48	कदरी	15000	3	45,000			27000		
	<b>Total</b>			<b>2863600</b>			<b>5154480</b>		

• No River Boulder and Bajri mines in Chhatarpur District.

State Land Surveyor  
Assessor, Chhattarpur, M.P.

E-5, A.C.C., Chhattarpur, M.P.)

## District Survey Report: Chhatarpur

Details of Annual Deposition						
S.L.	Name of Mines	Total Area in Sq.M.	Standard Depth in meters	Sand Mines Quantity cubic meters	Mineable mineral potential (in m <sup>3</sup> *60 % of total mineral potential)	Name of River
0						
1	रामपुर	31000	3	93000	55800	Kail River
2	पड़वार-1	100000	3	3,00,000	180000	Ken River
3	नवींधाट-1	140000	3	4,20,000	252000	Ken River
4	बस्ता	39900	3	1,19,700	71820	Ken River
5	ऐकना	21500	3	64,500	38700	Kail River
6	परेई-1	50000	3	1,50,000	90000	Ken River
7	पड़वार-2	60000	3	1,80,000	108000	Ken River
8	नवींधाट-2	70000	3	2,10,000	126000	Ken River
9	फरेई-2	100000	3	3,00,000	180000	Ken River
10	रामपुरधाट	40000	3	1,20,000	72000	Ken River
11	बाराबंद-3	40000	3	1,20,000	72000	Ken River
12	कन्देला	15000	3	45,000	27000	Ken River

## District Survey Report: Chhattarpur

13	गोयस-1	40000	3	1,20,000	72000	Ken River
14	थारिदेहा	100000	3	3,00,000	180000	Ken River
15	महवाया	40000	3	1,20,000	72000	Ken River
16	अलीतपुर	40000	3	1,20,000	72000	Ken River
17	बारबद-4	100000	3	3,00,000	180000	Ken River
18	गोयस-2	100000	3	3,00,000	180000	Ken River
19	फतेहपुर	20000	3	60,000	36000	Ken River
20	झौशारेत	52000	3	1,56,000	93600	Ken River
21	खदान	140000	3	4,20,000	2,52,000	Ken River
22	नेहरा	120000	3	3,60,000	2,16,000	Ken River
23	बारबद- नो 1	120000	3	3,60,000	2,16,000	Ken River
24	बारबद- नो 2	120000	3	3,60,000	2,16,000	Ken River
25	लसाराया	126000	3	3,78,000	2,26,800	Ken River
26	बंजारी	123000	3	3,69,000	2,21,400	Ken River
27	बंजारी-1	115000	3	3,75,000	2,25,000	Ken River
28	हरह	125000	3	3,45,500	2,07,000	Ummi River
29	सूरजपुर	40000	3	1,20,000	72000	Ken River
30	हिनोता	40000	3	1,20,000	72000	Ken River
31	सडकर	40000	3	1,20,000	72000	Ken River

## District Survey Report: Chhattarpur

31	बसरी नं० २	80000	3		2,40,000	1,44,000 Ken River
32	सुप्र	28000	3		84,000	50400 Urmil River
33	डिगोनी	40000	3		1,20,000	72000 Urmil River
34	दुर्गेला	40000	3		1,20,000	72000 Urmil River
35	कुटिया	21000	3		63,000	37800 Banne River
36	बगासक	42000	3		1,26,000	75600 Urmil River
37	कलतारांज	70000	3		2,10,000	1,26,000 Dhasan River
38	टीला-२	60000	3		1,80,000	108000 Dhasan River
39	उलीपुरा-२	70000	3		2,10,000	1,26,000 Dhasan River
40	टीला-१	40000	3		1,20,000	72000 Dhasan River
41	अलीपुरा-१	40000	3		1,20,000	72000 Kathan River
42	मीरा (सिंजवाहा)	35200	3		1,05,600	63360 Kathan River
43	नारायणपुर	20000	3		60,000	36000 Banne River
44	सिंधामपुरा	20000	3		60,000	36000 Banne River
45	अमरपुरा	15000	3		45,000	27000 Banne River
46	दिवेल	25000	3		75,000	45000 Tarter River
47	रामपुर (कुर्रा)	14000	3		42,000	25200 Tarter River
48	कदरी	15000	3		45,000	27000 Burha Nala
	Total				2863600	5154480

State Level Environment Impact  
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(EPCO)

Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.) 84

## District Survey Report: Chhatarpur

### Details of the Concession area in the district

S L.	Name of River or Stream	Length of area recommended for mineral concession (in kilometers)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in m <sup>2</sup> )	Total Sand Potential in m <sup>3</sup>	Mineable mineral potential (in m <sup>3</sup> (60% of total mineral potential) = Volume x 60/100
1	Kail River Village – Rampur Khasra No. – 306/1	0.42	73.8095	31000 x 3	93000	55800
2	Ken River Village – Padwar Khasra No. – 1540/1	0.84	119.048	100000 x 3	3,00,000	180000
3	Ken River Village – Mawaighat Khasra No. – 396/2	1.08	129.63	140000 x 3	4,20,000	252000
	Ken River Village – Barua Khasra No. - 609	0.30	133	39900 x 3	1,19,700	71820
	Kail River Village – Revana Khasra No. – 1298/1	0.35	61.4285	21500 x 3	64,500	38700
	Ken River Village – Parei Khasra No. – 613/1	0.38	131.579	50000 x 3	1,50,000	90000

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Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

7	Ken River Village – Padwar Khasra No. – 1540/1	0.51	117.647	60000 x 3	1,80,000	108000
8	Ken River Village – Mawaighat Khasra No. - 39	0.620	112.9032	70000 x 3	2,10,000	126000
9	Ken River Village – Parei Khasra No. - 561	0.55	181.819	100000 x 3	3,00,000	180000
10	Ken River Village – Rampurghat Khasra No. - 2	0.20	200	40000 x 3	1,20,000	72000
11	Ken River Village – Barbandh Khasra No. – 472/2	0.29	137.931	40000 x 3	1,20,000	72000
12	Ken River Village – Kandela Khasra No. – 48	0.20	75	15000 x 3	45,000	27000
13	Ken River Village – Goyra Khasra No. – 2531/13	0.29	137.931	40000 x 3	1,20,000	72000
	Ken River Village – Barikheda Khasra No. – 269/231	0.63	158.7301	100000 x 3	3,00,000	180000
	Ken River Village – Mahwaya Khasra No. – 1163	0.22	181.818	40000 x 3	1,20,000	72000

## District Survey Report: Chhatarpur

	Ken River	220.9945	40000 x 3	1,20,000	72000
16	Village – Ajeetpur Khasra No. – 656	0.181			
17	Ken River	147.059	100000 x 3	3,00,000	180000
18	Village – Barbandh Khasra No. – 472/2	0.68			
19	Ken River	232.559	100000 x 3	3,00,000	180000
20	Village – Goyra Khasra No. – 253 I/13	0.43			
21	Ken River	95.238	20000 x 3	60,000	36000
22	Village – Fattehpur Khasra No. – 2/2	0.21			
23	Ken River	148.5715	52000 x 3	1,56,000	93600
	Village – Dhuara	0.35			
	Khasra No. – 332				
	Ken River	94.5945	140000 x 3	4,20,000	2,52,000
	Village – Nehra Khasra No. – 697/1	1.48			
	Ken River	153.846	120000 x 3	3,60,000	2,16,000
	Village – Barbandh Khasra No. – 472/2	0.78			
	Ken River	153.846	120000 x 3	3,60,000	2,16,000

State Level Environment Impact  
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Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

District Survey Report: Chhattarpur				
Ken River	138.461	126000 x 3	3,78,000	2,26,800
24 Village – Lasgarya Khasra No. – 405				
Ken River	125.51	123000 x 3	3,69,000	2,21,400
25 Village – Banjari Khasra No. – 730				
Ken River	0.85	147.059	125000 x 3	3,75,000
26 Village – Harrai Khasra No. – 2771				
Ken River	0.95	121.053	115000 x 3	3,45,500
27 Village – Baghari Khasra No. – 854				
Urmil River	0.91	43.956	40000 x 3	1,20,000
28 Village – Surajpur Khasra No. – 818				72000
Ken River	0.30	133.3334	40000 x 3	1,20,000
29 Village – Hinauta Khasra No. – 495/2				72000
Ken River	0.35	114.2856	40000 x 3	1,20,000
30 Village – Sadkar Khasra No. – 1400				72000
Ken River	0.71	112.676	80000 x 3	1,44,000
31 Village – Baghari Khasra No. – 854				
Urmil River	0.78	35.8974	28000 x 3	84,000
32 Village – Sura Khasra No. – 257				

## District Survey Report: Chhattarpur

33	Urmil River Village – Digauni Khasra No. – 917,1011	0.88	45.4545	40000 x 3	1,20,000	72000
34	Urmil River Village – Kurela Khasra No. – 2/1011	0.87	45.977	40000 x 3	1,20,000	72000
35	Banne River Village – Kutia Khasra No. – 1	0.71	29.5774	21000 x 3	63,000	37800
36	Urmil River Village – Bagmau Khasra No. – 1063	0.93	45.1613	42000 x 3	1,26,000	75600
37	Dhasan River Village – Kararaganj Khasra No. – 1	0.76	92.1053	70000 x 3	2,10,000	1,26,000
38	Dhasan River Village – Tila Khasra No. – 574	0.55	109.0909	60000 x 3	1,80,000	108000
39	Dhasan River Village – Alipura Khasra No. – 2113	0.58	120.6896	70000 x 3	2,10,000	1,26,000
40	Dhasan River Village – Tila Khasra No. – 574	0.44	90.9098	40000 x 3	1,20,000	72000
	Dhasan River Village – Alipura Khasra No. – 2113	125	40000 x 3	1,20,000	72000	

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(EPA)

Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

	Kathan River					
42	Village - Morra (Sijwaha)	0.97	36.2887	35200 x 3	1,05,600	63360
	Khasra No. - 128					
43	Banne River	0.74	27.027	20000 x 3	60,000	36000
	Village - Narayanpura Khasra No. - 189,658					
44	Banne River	0.86	23.2558	20000 x 3	60,000	36000
	Village - Singranpura Khasra No. - 53,369					
45	Banne River	0.50	30	15000 x 3	45,000	27000
	Village - Amarpura Khasra No. - 332					
46	Tarper River	0.40	62.5	25000 x 3	75,000	45000
	Village - Didol Khasra No. - 818					
	Tarper River	0.69	20.2899	14000 x 3	42,000	25200
	Village - Rampur (Kurra)					
	Khasra No. - 701					
	Burha Nala					27000
	Village - Kadari					
	Khasra No. - 672					
	Total	29.641 (Approx)	191.9 (Approx)	2863600 x 3	8590800	5154480

Staff Level Environment Impact  
Assessment Authority, M.P.  
*CEPDA*

Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

**Annexures to**  
**District Survey Report**  
**Chhattarpur District**

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State Level Environment Impact  
Assessment Authority, M.P.  
(EPCO)  
Paryavaran Parishar  
E-5, Arera Colony, Bhopal (M.P.)

**Details of Sand/M-Sand Sources**

a) Rivers:

River Name/M-Sand Plant	Total Stretch of River(in KM)	Type of River (Perennial or Non- Perennial )
Ken River	186.92 kms	Perennial
Dhuvar River	121.77 kms	Perennial
Bewya River	20.57 kms	Perennial
Tarper River	22.56 kms	Perennial
Baner River	43.80 kms	Perennial

b) De-Silting Location: (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Controlled by Govt./PSU etc.	State	Location	Location	District	Tehsil	Village	Size(ha)
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

c) Patti Lands/Khatedari Land:

Owner	Sl. No.	Area (ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
NIL	NIL	NIL	NIL	NIL	NIL	NIL

d) M-Sand Plants:

SL.No.	Plant Name	Owner	District	Tehsil	Village	Geo-Location	Quantity Treated/Annually
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

*S. Singh*  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCA)  
 Paryavaran Parivar  
 E-5, Arera Colony, Bhopal (M.P.)

**List of Potential Mining Lease (existing & proposed) Rivers**

Annexure-II

SL No	River Details	Lease Detail			Area (in ha)	Distance (in KM) from PA/ER/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (If yes cluster area)	Total excavation in (MT/MTs.) (Mine depth max as 3 m)	Mineral to be mined. (Sand/Gauge/RBM etc.)	Existing/ Proposed	
		नाम	प्राचीन नाम	उपनाम								
1	केस	झारखंड	गोदिल	करमट	306/1	3.100	> 10 kms	> 250 meter	Non Cluster, B2 (SI. No 2+8)	93000	Sand	Proposed
2	केन	झारखंड	गोदिल	महसन-1	1540/1	10.000	> 10 kms	> 250 meter	17.000 ha	300000	Sand	Proposed
3	केन	झारखंड	गोदिल	महसन-1	190/2	14.000	> 10 kms	> 250 meter	Non Cluster, B1 (SI. No. 4+6+9)	420000	Sand	Proposed
4	केन	झारखंड	गोदिल	करमट	609	3.900	> 10 kms	> 250 meter	18.900 ha	119700	Sand	Proposed
5	केन	झारखंड	गोदिल	करमट	1298/1	2.150	> 10 kms	> 250 meter	Non Cluster, B2 (SI. No 6+9+4)	64500	Sand	Proposed
6	केन	झारखंड	गोदिल	पर्दे-1	613/1	5.000	> 10 kms	> 250 meter	18.900 ha	150000	Sand	Proposed
7	केन	झारखंड	गोदिल	पर्दे-2	1540/1	6.000	> 10 kms	> 250 meter	Non Cluster, B1 (SI No 8+2)	180000	Sand	Proposed
8	केन	झारखंड	गोदिल	फरवर-2	39	7.000	> 10 kms	> 250 meter	17.00 ha	210000	Sand	Proposed
9	केन	झारखंड	गोदिल	पर्दे-2	561	10.000	> 10 kms	> 250 meter	18.90 ha	360000	Sand	Proposed
10	केन	झारखंड	गोदिल	रामधनुषट	2	4.000	> 10 kms	> 250 meter	Non Cluster, B2	120000	Sand	Proposed
11	केन	झारखंड	गोदिल	करमट-3	472/2	4.000	> 10 kms	> 250 meter	Non Cluster, B2 (SI. No 12+13+18)	120000	Sand	Proposed
12	केन	झारखंड	गोदिल	करमट	48	1.500	> 10 kms	> 250 meter	15.5 ha	45000	Sand	Proposed
13	केन	झारखंड	गोदिल	करमट-1	253/1/13	4.000	> 10 kms	> 250 meter	15.5 ha	120000	Sand	Proposed
14	केन	झारखंड	गोदिल	गोदेठा	269/23/1	10.000	> 10 kms	> 250 meter	Non Cluster, B1	300000	Sand	Proposed
15	केन	झारखंड	गोदिल	करमट	1163	4.000	> 10 kms	> 250 meter	Non Cluster, B2	120000	Sand	Proposed
16	केन	झारखंड	गोदिल	करमट	6556	4.000	> 10 kms	> 250 meter	Non Cluster, B2 (SI. No. 17+22+23)	120000	Sand	Proposed
17	केन	झारखंड	गोदिल	करमट-4	472/3	10.000	> 10 kms	> 250 meter	34.000 ha	300000	Sand	Proposed

18	केन	छत्तेश्वर	पालियां	छत्तेश्वर-2	253 वि/३	10,000	> 10 kms	> 250 meter	(SL No 12+13+18)	300000 15.5ha
19	फेम	छत्तेश्वर	पालियां	छत्तेश्वर	2/2	2,000	> 10 kms	> 250 meter	Non Cluster, B2	60000 Sand
20	फेम	छत्तेश्वर	पालियां	छत्तेश्वर	3/32	5,000	> 10 kms	> 250 meter	Non Cluster, B2	156000 Sand
21	केन	छत्तेश्वर	पालियां	नेहु	697/1	14,000	> 10 kms	> 250 meter	Non Cluster, B2 (SL No. 17+22)	420000 Sand
22	फेम	छत्तेश्वर	पालियां	पालियां का १	472/2	12,000	> 10 kms	> 250 meter	22,000 ha (SL No. 17+22)	360000 Sand
23	केन	छत्तेश्वर	पालियां	पालियां का २	472/2	12,000	> 10 kms	> 250 meter	22,000 ha (SL No. 17+22)	360000 Sand
24	केन	छत्तेश्वर	धंडला	धंडला	40/5	12,000	> 10 kms	> 250 meter	Non Cluster, B1	378000 Sand
25	केन	छत्तेश्वर	धंडला	धंडले	73/0	12,300	> 10 kms	> 250 meter	Non Cluster, B1 (SL No. 26+27)	369000 Sand
26	केन	छत्तेश्वर	धंडला	धंड	277/1	12,500	> 10 kms	> 250 meter	23.0ha (SL No. 26+27)	375000 Sand
27	केन	छत्तेश्वर	धंडला	धंडले-१	85/4	11,500	> 10 kms	> 250 meter	23.0ha	345000 Sand
28	एसपीएस	छत्तेश्वर	धंडला	दुन्दुर	81/3	4,000	> 10 kms	> 250 meter	Non Cluster, B2 (SL No. 29+31)	120000 Sand
29	केन	छत्तेश्वर	धंडला	हिन्दा	495/2	4,000	> 10 kms	> 250 meter	12.0ha (SL No. 29+31)	120000 Sand
30	फेम	छत्तेश्वर	धंडला	हिन्दा	14/0	4,000	< 10 kms	> 250 meter	Non Cluster, B2 (SL No. 29+31)	120000 Sand
31	केन	छत्तेश्वर	धंडला	धंडले का २	83/4	8,000	> 10 kms	> 250 meter	12.0ha (SL No. 32+36)	240000 Sand
32	उर्मीन	छत्तेश्वर	धंडलार	धंड	25/7	2,800	> 10 kms	> 250 meter	7.0ha (SL No. 32+36)	84000 Sand
33	उर्मीन	छत्तेश्वर	धंडलार	धिनी	971, 10/1	4,000	> 10 kms	> 250 meter	Non Cluster, B2	120000 Sand
34	उर्मीन	छत्तेश्वर	धंडलार	धुम्ह	2/10/1	4,000	> 10 kms	> 250 meter	Non Cluster, B2	120000 Sand
35	जाने	छत्तेश्वर	धंडलार	धुम्ह	1/16/3	4,200	> 10 kms	> 250 meter	(SL No. 32+36) 7.0ha	126000 Sand
36	वर्किन	छत्तेश्वर	सप्तपुष्टपाल	धन्डल	1	7,000	> 10 kms	> 250 meter	Non Cluster, B2	210000 Sand
37	परम	छत्तेश्वर	तीरापाल	कालाज	574	6,000	> 10 kms	> 250 meter	(SL No. 38+40) 10.0ha	180000 Sand
38	परम	छत्तेश्वर	तीरापाल	टो-७-२	2/11/3	7,000	> 10 kms	> 250 meter	(SL No. 39+41) 11.0ha	210000 Sand

40	वारान्सी	उत्तराखण्ड	गोदावरी	टीन-१	574	4,000	> 10 Kms	(SL No 38+40) 10,000ha. (Sl. No. 39+41) 11,000ha.	120000	Sand	Proposed	
41	पश्चिम	उत्तराखण्ड	गोदावरी	अंडमान-५	2113	4,000	> 10 Kms	> 250 meter	(Sl. No 39+41)	120000	Sand	Proposed
42	कृष्ण	उत्तराखण्ड	गोदावरी	गोदावरी (दिवाली)	128	3,520	> 10 Kms	> 250 meter	Non Cluster, B2	105600	Sand	Proposed
43	हनुमा	उत्तराखण्ड	गोदावरी	गोदावरी	189, 656	2,000	> 10 Kms	> 250 meter	Non Cluster, B2	82000	Sand	Proposed
44	हनुमा	उत्तराखण्ड	गोदावरी	सिंधुपुरुष	53, 369	2,000	> 10 Kms	> 250 meter	Non Cluster, B2	60000	Sand	Proposed
45	रानी	उत्तराखण्ड	गोदावरी	अमृता	332	1,300	> 10 Kms	> 250 meter	Non Cluster, B2	45000	Sand	Proposed
46	तरंगेश	उत्तराखण्ड	गोदावरी	विक्रम	218	2,460	> 10 Kms	> 250 meter	Non Cluster, B2	75000	Sand	Proposed
47	सर्वदेव	उत्तराखण्ड	गोदावरी	चमु (पुरी)	701	1,400	> 10 Kms	> 250 meter	Non Cluster, B2	42000	Sand	Proposed
48	शुगा	उत्तराखण्ड	गोदावरी	फली	572	1,500	> 10 Kms	> 250 meter	Non Cluster, B2	45000	Sand	Proposed

#### Puttu Lands/Khatedari Land: (Existing & Proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT) *in ha.	Total Mineral to be reduced (MT) *in ha.	Total Mineral to be reduced (MT) *in ha.	Existing/ Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

MT density factor ~ 1.8

\* Total Reserve (MT) considered upto 3 meters

Name of Reservoir/Dams	Main/Minor/Controlled by State Govt./P.U. etc.	Location	District	Tehsil	Village	Size (ha.)	Quantity MT/year	Quantity Tonnes/Annum	Existing/ Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

#### MI-Sand Plants: (Existing & proposed)

SL.No.	Plant Name	Owner	District	Tehsil	Village	Geo-Location	Quantity Tonnes/Annum	Existing/ Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

State Level Environment Impact Assessment Authority, M.P.  
(EPCO)  
Parivaran Parivar  
C-5, Arera Colony, Bhopal (M.P.)

**Cluster & Continguous Cluster details Clusters:-**

**Annexure-III**

Sl. No	River Details	Cluster No.	Lease No.	Lease Detail			Area (in ha)	Total Excavation (Ton) (Mine depth max as 3 m) & Bulk Density of Sand considered 1.8	Total Mineral Excavation (Ton) (Lot Qty x Bulk Density factor of 1.8)
				क्षेत्रफल का राशि	मिला	खाता का			
1	झील	1	1	छत्यार	गोपनियत	जलमय	30.61	3.100	167400
2	कंव	2	1	छत्यार	गोपनियत	पदमर-1	154.81	10.000	300000
3	कंव	3	1	छत्यार	गोपनियत	पदमर-1	39.62	14.000	450000
4	कंव	4	1	छत्यार	गोपनियत	पदमर	60.9	3.990	420000
5	रुमस	5	1	छत्यार	गोपनियत	रेक्ता	129.81	2.150	270000
6	कंव	4	2	छत्यार	गोपनियत	पदमर-1	61.21	5.000	119700
7	कंव	6	1	छत्यार	गोपनियत	पदमर-2	154.61	6.000	144000
8	कंव	2	2	छत्यार	गोपनियत	पदमर-2	39	7.000	108000
9	कंव	4	3	छत्यार	गोपनियत	कंधे-2	56.1	10.000	180000
10	कंव	7	1	छत्यार	गोपनियत	राजनुवाट	2	4.000	36000
11	झील	8	1	छत्यार	गोपनियत	पदमर-3	47.22	4.000	120000
12	कंव	9	1	छत्यार	गोपनियत	कंधे-3	48	1.500	45000
13	कंव	9	2	छत्यार	गोपनियत	गोवट-1	243.113	4.000	216000
14	कंव	10	1	छत्यार	गोपनियत	गोवट-2	269.231	10.000	260000
15	कंव	11	1	छत्यार	गोपनियत	जलमय	116.3	4.000	120000
16	कंव	12	1	छत्यार	गोपनियत	जलमय	65.6	4.000	36000
17	कंव	13	1	छत्यार	गोपनियत	पदमर-4	47.22	10.000	144000

  
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 (EPCO)  
 Parivarayan Parisar  
 E-5, Aroha Colony, Bhopal (M.P.)

18	क्रा	9	3	आरपू	नीतिकल	गोपनीय-2	2331713	10,000	300000	1440000.00
19	क्र-	14	1	आरपू	गोपिता	आरपू	2/2	3,000	60000	720000.00
20	क्रन	15	1	आरपू	गोपिता	बनामता धरान	332	5,200	156000	1260001.00
21	क्रन	16	1	आरपू	गोपिता	नहु	697/1	14,000	424000	1800000.00
22	क्र-	13	2	आरपू	गोपिता	वारद नं 1	472/2	12,000	360000	900000.00
23	क्र-	13	3	आरपू	गोपिता	वारद नं 2	472/2	12,000	360000	900000.00
24	क्र-	17	1	आरपू	वारद आ	लम्पाया	465	12,600	378000	908000.00
25	क्र-	18	1	आरपू	वारद आ	वारदा	730	12,300	359000	950000.00
26	क्र-	19	1	आरपू	वारद आ	वारदा	277/1	12,500	375000	1170000.00
27	क्र-	19	2	आरपू	वारद आ	वारदा	854	11,500	345000	1350000.00
28	क्र-	20	1	आरपू	वारद आ	वारदा	818	4,000	120000	270000.00
29	क्र-	21	1	आरपू	वारद आ	वारदा	495/2	4,000	120000	350000.00
30	क्र-	22	1	आरपू	वारद आ	वारदा	140/0	4,000	120000	630000.00
31	क्र-	21	3	आरपू	वारद आ	वारद नं 2	834	3,000	240000	1440000.00
32	उपर्येक्ष	23	1	आरपू	वारद आ	वारद	257	2,500	84000	216000.00
33	उपर्येक्ष	24	1	आरपू	वारद आ	वारद	971, 101/1	4,500	120000	216000.00
34	उपर्येक्ष	25	1	आरपू	वारद आ	वारद	2/101/1	4,000	120000	160000.00
35	क्र-	26	1	आरपू	वारद आ	वारद	1	2,100	63000	216000.00
36	उपर्येक्ष	23	1	आरपू	वारद आ	वारद	1063	4,200	126000	180000.00
37	क्र-	27	1	आरपू	वारद आ	वारद	1	7,000	210000	450000.00
38	उपर्येक्ष	28	1	आरपू	वारद आ	दीस-2	574	6,000	180000	540000.00
39	क्र-	29	2	आरपू	वारद	वारद	211/2	7,000	210000	90000.00


  
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40	पालन	28	2	परम्परा	नीराव	देखाना-1	574	4,000	120000	810000.00
41	पालन	29	2	अलवृह	जैगंग	अरक्षीपुर-1	2113	4,000	120000	630000.00
42	पालन	30	1	अलवृह	खामोशकरा	नोटे ठिरजस्ता	128	3,500	105600	630000.00
43	हनी	31	1	अलवृह	खिकार	कारपत्रुप	180, 658	2,000	60000	270000.00
44	हनी	32	1	अलवृह	खिकार	दिचान्धु	53, 369	2,000	60000	134000.00
45	बनी	33	1	अलवृह	खिकार	आकपुर	332	1,500	45000	215000.00
46	हरपर	34	1	अलवृह	छलपुर	विदेश	818	1,500	75000	180000.00
47	हरपर	35	1	अलवृह	छलपुर	सन्तु छोटी	701	1,400	42000	160000.00
48	युक्त गांव	36	1	अलवृह	छलपुर	कदम्बी	672	1,500	45000	216000.00

Contiguous Clusters:			Location (Riverbed/Patta Land)		Distance between clusters		Village		Area of Cluster (ha.)		Total Mineral Excavation (ton)
River Name	Contiguous Cluster No.	Cluster No.	No. of Lenses in the Cluster	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	

\* Total Excavation (Ton) considered upto 3 meters

*D. Singh*  
 State Level Environment Impact  
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 E-5, Arera Colony, Bhopal (M.P.)

## Transportation Request for individual leases and leases in cluster

Lease No. and Details				Transportation Route No.	Number of Trips per day of lease	Number of Trips per day of lease to all the latest route	Length of Route in KM	Type of Road (Black Topped / Unpaved)	Recommendation for road (Black Topped / unpaved)	The Road will be constructed by Govt. / Lease Owner	Road Map & Location
No.	Owner	Lease No.	Location of lease	From	To	From	To				
1	कृष्ण	परिवार शर्मा - ग्रामज़	ग्रामज़	306/1/1	3.00	1	3	2.60	unpaved	unpaved	Village Kathi Road
3	कृष्ण	परिवार शर्मा - ग्रामज़-1	ग्रामज़-1	399/2/1	14.03	2	35	7.93	unpaved	Lease owner	Garwal-Banda (Pali) Road
5	कृष्ण	परिवार शर्मा - ग्रामज़-2	ग्रामज़-2	1298/1/1	2.50	3	2	1.40	unpaved	Lease owner	Village Kathi Road
7	कृष्ण	परिवार शर्मा - ग्रामज़-3	ग्रामज़-3	1540/1/1	6.00	4	5	6.79	unpaved	Lease owner	MDR-118 - Banda-Tindukwari-Kotwaliya Road
10	कृष्ण	परिवार शर्मा - ग्रामज़	ग्रामज़	1	4.00	5	7	1.84	unpaved	Lease owner	Garwal-Banda (Pali) Road
11	कृष्ण	परिवार शर्मा - 3	ग्रामज़	472/2/1	4.00	6	13	3.21	unpaved	Lease owner	SH - 49 - Nalanda-Panna-Damoh Road
14	कृष्ण	परिवार शर्मा	ग्रामज़	209/2/2/1	20.00	7	18	5.75	unpaved	unpaved	Village Kathi Road
15	कृष्ण	परिवार शर्मा	ग्रामज़	1153/2/1	4.00	8	5	0.60	unpaved	Lease owner	Village Kathi Road
18	कृष्ण	परिवार शर्मा	ग्रामज़	1524/2/2/1	5	6	6	2.81	unpaved	Lease owner	SH - 49 - Nalanda-Panna-Damoh Road
19	कृष्ण	परिवार शर्मा	ग्रामज़	2/2	2.00	10	10	1.10	unpaved	Lease owner	Garwal-Banda (Pali) Road
20	कृष्ण	परिवार शर्मा	ग्रामज़	302/2/2/1	3.00	11	12	3.36	unpaved	Lease owner	SH - 49 - Nalanda-Panna-Damoh Road
21	कृष्ण	परिवार शर्मा	ग्रामज़	607/2/1	14.00	12	25	4.12	unpaved	Lease owner	SH - 49 - Nalanda-Panna-Damoh Road
24	कृष्ण	परिवार शर्मा	ग्रामज़	405/2/2/1	1.00	13	13	0.30	unpaved	Lease owner	Village Kathi Road

	क्रमांक	पुस्तक नं.	ठाणा	ठाणा	परिमाण	लंबाई	730	12,300	14	14	14	10.75	रेप्रेसेट	उपरोक्त	इसे चारा
25	खाली	पुस्तक	खाली	खाली	खाली	खाली	815	4,370	15	4	4	0.95	उपरोक्त	उपरोक्त	इसे चारा
26	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	4,000	14	9	9	11.15	उपरोक्त	उपरोक्त	इसे चारा
27	खाली	पुस्तक	खाली	खाली	खाली	खाली	971, 1011	4,000	17	3	3	5.92	उपरोक्त	उपरोक्त	इसे चारा
28	खाली	पुस्तक	खाली	खाली	खाली	खाली	2,011	4,000	18	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
29	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,210	2,310	15	3	3	3.02	उपरोक्त	उपरोक्त	इसे चारा
30	खाली	पुस्तक	खाली	खाली	खाली	खाली	2,011	4,000	18	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
31	खाली	पुस्तक	खाली	खाली	खाली	खाली	2,011	4,000	18	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
32	खाली	पुस्तक	खाली	खाली	खाली	खाली	2,011	4,000	18	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
33	खाली	पुस्तक	खाली	खाली	खाली	खाली	971, 1011	4,000	17	3	3	5.92	उपरोक्त	उपरोक्त	इसे चारा
34	खाली	पुस्तक	खाली	खाली	खाली	खाली	2,011	4,000	18	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
35	खाली	पुस्तक	खाली	खाली	खाली	खाली	1	2,310	15	3	3	3.02	उपरोक्त	उपरोक्त	इसे चारा
36	खाली	पुस्तक	खाली	खाली	खाली	खाली	125	3,300	21	3	3	3.45	उपरोक्त	उपरोक्त	इसे चारा
37	खाली	पुस्तक	खाली	खाली	खाली	खाली	1	7,400	20	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
38	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
39	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
40	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
41	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
42	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
43	खाली	पुस्तक	खाली	खाली	खाली	खाली	1,000	6,500	21	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
44	खाली	पुस्तक	खाली	खाली	खाली	खाली	53, 369	2,300	29	3	3	1.80	उपरोक्त	उपरोक्त	इसे चारा
45	खाली	पुस्तक	खाली	खाली	खाली	खाली	53, 369	2,300	29	3	3	1.80	उपरोक्त	उपरोक्त	इसे चारा
46	खाली	पुस्तक	खाली	खाली	खाली	खाली	53, 369	2,300	29	3	3	1.80	उपरोक्त	उपरोक्त	इसे चारा
47	खाली	पुस्तक	खाली	खाली	खाली	खाली	572	1,500	27	3	3	1.00	उपरोक्त	उपरोक्त	इसे चारा
48	खाली	पुस्तक	खाली	खाली	खाली	खाली	572	1,500	27	3	3	1.77	उपरोक्त	उपरोक्त	इसे चारा

\* classifying 1/2 km track with carrying capacity of 1/6 cubic meter : cost 250 working day

*Divya*  
State Level Environment Impact  
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Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

Cluster No.	Transportation Route No.	Number of tipper/day (cluster)	Number of tippers/day of all the clusters on route	Length of route in KM	Type of road (Black Topped/unpaved)	Recommendation for road (Black Topped/unpaved)	The road will be constructed by Govt/Lease Owner	Route Map & Location
2	28	19	19	6.51	Unpaved	Unpaved	Lease Owner	Girwan-Benda (P.U) Road & MDR -13B - Benda-Tinduwar-Balihari Road
4	29	37	37	Unpaved	Unpaved	Unpaved	Lease Owner	MCR -11B - Banda-Tinduwar-Kalihari Road
9	30	36	36	Unpaved	Unpaved	Unpaved	Lease Owner	Girwan-Banda (P.U) Road
13	31	46	46	Unpaved	Unpaved	Unpaved	Lease Owner	SH - 48 - Malant-Panu-Damod Road
19	32	35	35	Unpaved	Unpaved	Unpaved	Lease Owner	SH - 49 + Nolana-Panu-Damod Road
21	33	7	7	Unpaved	Unpaved	Unpaved	Lease Owner	Lekhadmagar-Chitramur Main SH - 39 - Panu - Khajuraho Main SH - 39 - Panu - Khajuraho Main
23	34	6	6	Unpaved	Unpaved	Unpaved	Lease Owner	Lekhadmagar-Chitramur Main SH - 39 - Panu - Khajuraho Main SH - 39 - Panu - Khajuraho Main
28	35	19	19	Unpaved	Unpaved	Unpaved	Lease Owner	Lekhadmagar-Chitramur Main SH - 39 - Panu - Khajuraho Main SH - 39 - Panu - Khajuraho Main
29	36	22	22	Unpaved	Unpaved	Unpaved	Lease Owner	Lekhadmagar-Chitramur Main SH - 39 - Panu - Khajuraho Main SH - 39 - Panu - Khajuraho Main

State Level Environment Impact  
Assessment Authority, M.P.  
(EFCO)

Paryavaran Parivar  
E-5, Areca Colony, Bhopal (M.P.)

Details of Geo-Cordinates of Leases in Chattarpur District

Annexure – C-AI/Chattarpur

SL NO	River Details	पिंड	Lease Detail		Geo-Coordinates of the Lease			
			लालीख छा कम	पत्ता	कर्कंठ	BR. No.	LATITUDE	LONGITUDE
1	केन	प्रभुद्वार	गोदाम			1	25° 14' 49" N	80° 7' 56" E
		गोदाम				2	25° 14' 51" N	80° 7' 56" E
						3	25° 14' 52" N	80° 7' 56" E
						4	25° 14' 53" N	80° 7' 56" E
						5	25° 14' 54" N	80° 7' 56" E
						6	25° 14' 54" N	80° 7' 56" E
						7	25° 14' 55" N	80° 7' 56" E
						8	25° 14' 56" N	80° 7' 56" E
						9	25° 14' 57" N	80° 7' 56" E
						10	25° 14' 58" N	80° 7' 56" E
						11	25° 14' 59" N	80° 7' 56" E
2	केन	प्रभुद्वार	गोदाम-1			1	25° 2' 53" N	80° 18' 54" E
						2	25° 2' 53" N	80° 18' 54" E
						3	25° 2' 53" N	80° 18' 54" E
						4	25° 2' 53" N	80° 18' 54" E
						5	25° 2' 53" N	80° 18' 54" E
						6	25° 2' 53" N	80° 18' 54" E
						7	25° 2' 53" N	80° 18' 54" E
						8	25° 2' 53" N	80° 18' 54" E
						9	25° 2' 53" N	80° 18' 54" E
						10	25° 2' 53" N	80° 18' 54" E
						11	25° 2' 53" N	80° 18' 54" E

*[Signature]*  
State Level Environmental Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parivar  
E-5, Aroha Colony, Bhopal (M.P.)

				13	23°22'56.41"N 067°43'21"E
				DP. No.	LATITUDE LONGITUDE
3	केन	प्रसादगु	वारिहन	A	23°18'59.24"N 067°49'09.10"E
				B	23°19'22.01"N 067°49'57.91"E
				C	23°19'22.33"N 067°49'56.91"E
				D	23°19'53.30"N 067°49'11.89"E
				E	23°19'54.30"N 067°49'14.70"E
				F	23°20'09.57"N 067°49'24.01"E
				DP. No.	LATITUDE LONGITUDE
				G	23°20'17.37"N 067°49'33.36"E
				H	23°20'42.17"N 067°49'53.94"E
				I	23°20'42.47"N 067°49'53.94"E
				J	23°20'47.97"N 067°49'51.96"E
				K	23°20'51.38"N 067°49'51.97"E
				L	23°20'51.45"N 067°49'51.97"E
				M	23°20'51.45"E
				N	23°20'51.45"E
				O	23°20'51.45"E
				P	23°20'51.45"E
				DP. No.	LATITUDE LONGITUDE
				Q	23°19'51.45"N 067°49'45.47"E
				R	23°19'51.45"E
				S	23°19'51.45"E
				T	23°19'51.45"E
				U	23°19'51.45"E
				V	23°19'51.45"E
				W	23°19'51.45"E
				X	23°19'51.45"E
				Y	23°19'51.45"E
				Z	23°19'51.45"E
				DP. No.	LATITUDE LONGITUDE
				AA	23°19'51.45"N 067°49'45.47"E
				AB	23°19'51.45"E
				AC	23°19'51.45"E
				AD	23°19'51.45"E
				AE	23°19'51.45"E
				AF	23°19'51.45"E
				AG	23°19'51.45"E
				AH	23°19'51.45"E
				AI	23°19'51.45"E
				AJ	23°19'51.45"E
				AK	23°19'51.45"E
				AL	23°19'51.45"E
				AM	23°19'51.45"E
				AN	23°19'51.45"E
				AO	23°19'51.45"E
				AP	23°19'51.45"E
				AQ	23°19'51.45"E
				AR	23°19'51.45"E
				AS	23°19'51.45"E
				AT	23°19'51.45"E
				AU	23°19'51.45"E
				AV	23°19'51.45"E
				AW	23°19'51.45"E
				AX	23°19'51.45"E
				AY	23°19'51.45"E
				AZ	23°19'51.45"E
				DP. No.	LATITUDE LONGITUDE
				BA	23°20'29.27"N 067°49'50.74"E
				BB	23°20'39.85"N 067°49'50.74"E
				BC	23°20'39.85"N 067°49'50.74"E
				BD	23°20'41.07"N 067°49'50.74"E
				BE	23°20'41.07"N 067°49'50.74"E
				BF	23°20'41.07"N 067°49'50.74"E
				BG	23°20'41.07"N 067°49'50.74"E
				BH	23°20'41.07"N 067°49'50.74"E
				BI	23°20'41.07"N 067°49'50.74"E
				BJ	23°20'41.07"N 067°49'50.74"E
				BK	23°20'41.07"N 067°49'50.74"E
				BL	23°20'41.07"N 067°49'50.74"E
				BM	23°20'41.07"N 067°49'50.74"E
				BN	23°20'41.07"N 067°49'50.74"E
				BO	23°20'41.07"N 067°49'50.74"E
				BP	23°20'41.07"N 067°49'50.74"E
				AQ	23°20'41.07"N 067°49'50.74"E
				AR	23°20'41.07"N 067°49'50.74"E
				AS	23°20'41.07"N 067°49'50.74"E
				AT	23°20'41.07"N 067°49'50.74"E
				AV	23°20'41.07"N 067°49'50.74"E
				AW	23°20'41.07"N 067°49'50.74"E
				AX	23°20'41.07"N 067°49'50.74"E
				AY	23°20'41.07"N 067°49'50.74"E
				AZ	23°20'41.07"N 067°49'50.74"E
				DP. No.	LATITUDE LONGITUDE
				BA	23°20'24.90"N 067°49'50.74"E
				BB	23°20'34.56"N 067°49'50.74"E
				BC	23°20'34.56"N 067°49'50.74"E
				BD	23°20'36.00"N 067°49'50.74"E
				BE	23°20'37.22"N 067°49'50.74"E
				BF	23°20'37.22"N 067°49'50.74"E
				BG	23°20'37.22"N 067°49'50.74"E
				BH	23°20'37.22"N 067°49'50.74"E
				BI	23°20'37.22"N 067°49'50.74"E
				BJ	23°20'37.22"N 067°49'50.74"E
				BK	23°20'37.22"N 067°49'50.74"E
				BL	23°20'37.22"N 067°49'50.74"E
				BM	23°20'37.22"N 067°49'50.74"E
				BN	23°20'37.22"N 067°49'50.74"E
				BO	23°20'37.22"N 067°49'50.74"E
				BP	23°20'37.22"N 067°49'50.74"E
				AQ	23°20'37.22"N 067°49'50.74"E
				AR	23°20'37.22"N 067°49'50.74"E
				AS	23°20'37.22"N 067°49'50.74"E
				AT	23°20'37.22"N 067°49'50.74"E
				AV	23°20'37.22"N 067°49'50.74"E
				AW	23°20'37.22"N 067°49'50.74"E
				AX	23°20'37.22"N 067°49'50.74"E
				AY	23°20'37.22"N 067°49'50.74"E
				AZ	23°20'37.22"N 067°49'50.74"E

*State Level Environmental Impact*

Assessment Authority, M.P.  
(EPCO)

Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

S.	क्रमांक	प्रजाती	प्रजाती का नाम	लोकस्थान	लोकस्थान का वर्णन	LATITUDE		LONGITUDE	
						BP. No.	LATITUDE	BP. No.	LONGITUDE
8	३५	प्रजाती	प्रजाती-१	उत्तरी भारत	उत्तरी भारत में स्थित है।	१	२५°४७'१९.३7" N	८०°१६'३३.०१" E	
						२	२५°३५'४२.३८" N	८०°१८'२१.५८" E	
						३	२५°२५'२३.६२" N	८०°१८'४८.४१" E	
						४	२५°२५'१२.३८" N	८०°१८'२०.३१" E	
						५	२५°२५'१०.०३" N	८०°१८'२१.५८" E	
						६	२५°२५'०८.४८" N	८०°१८'२१.५८" E	
						७	२५°२५'०७.३५" N	८०°१८'२१.५८" E	
						८	२५°२५'०६.८८" N	८०°१८'२१.३८" E	
9	३६	प्रजाती	प्रजाती-२	गोदावरी	गोदावरी नदी के किनारे स्थित है।	१	२५°२५'५०.०८" N	८०°१८'५०.६८" E	
						२	२५°२५'५२.५५" N	८०°१८'५१.०८" E	
						३	२५°२५'५४.८८" N	८०°१८'५१.३८" E	
						४	२५°२५'५६.११" N	८०°१८'५१.३८" E	
						५	२५°२५'५७.७८" N	८०°१८'५१.३८" E	
						६	२५°२५'५८.०५" N	८०°१८'५१.३८" E	
						७	२५°२५'५८.६८" N	८०°१८'५१.३८" E	
						८	२५°२५'५८.८८" N	८०°१८'५१.३८" E	
10	३७	प्रजाती	प्रजाती-३	प्रजाती-३	प्रजाती-३ के किनारे स्थित है।	१	२५°२५'५०.९७" N	८०°१८'५०.६८" E	
						२	२५°२५'५१.३५" N	८०°१८'५१.०८" E	
						३	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						४	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						५	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
11	३८	प्रजाती	प्रजाती-४	गोदावरी	गोदावरी नदी के किनारे स्थित है।	१	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						२	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						३	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						४	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
						५	२५°२५'५१.३८" N	८०°१८'५१.०८" E	
12	३९	प्रजाती	प्रजाती-५	प्रजाती-५	प्रजाती-५ के किनारे स्थित है।	१	२५°२५'५२.७५" N	८०°१८'५१.५८" E	
						२	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
						३	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
						४	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
13	४०	प्रजाती	प्रजाती-६	गोदावरी	गोदावरी नदी के किनारे स्थित है।	१	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
						२	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
						३	२५°२५'५१.५८" N	८०°१८'५१.५८" E	
						४	२५°२५'५१.५८" N	८०°१८'५१.५८" E	


 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Parivahan Parivar  
 G-5, Area 5 Colony, Bhopal (M.P.)

S.No.	Name	Address	Area	Latitude		Longitude	
				RP. No.	Latitude	RP. No.	Longitude
14	कैन	परिवार	269/231	1	25° 17' 56.74" N	80° 37' 52.56" E	
				2	25° 17' 44.35" N	80° 37' 40.64" E	
				3	25° 17' 44.35" N	80° 37' 54.44" E	
				4	25° 17' 52.77" N	80° 37' 54.44" E	
				5	25° 17' 54.39" N	80° 37' 59.60" E	
				6	25° 17' 57.37" N	80° 37' 57.37" E	
				7	25° 17' 58.37" N	80° 37' 53.48" E	
				8	25° 17' 58.37" N	80° 37' 58.39" E	
				9	25° 17' 58.37" N	80° 37' 58.44" E	
				10	25° 17' 58.37" N	80° 37' 58.44" E	
15	कैन	परिवार	163	1	25° 17' 55.74" N	80° 37' 53.27" E	
				2	25° 17' 55.74" N	80° 37' 53.09" E	
				3	25° 17' 55.74" N	80° 37' 53.77" E	
				4	25° 17' 55.74" N	80° 37' 53.77" E	
				5	25° 17' 57.00" N	80° 37' 53.77" E	
				6	25° 17' 57.35" N	80° 37' 53.77" E	
				7	25° 17' 58.35" N	80° 37' 53.77" E	
				8	25° 17' 58.35" N	80° 37' 58.59" E	
				9	25° 17' 58.35" N	80° 37' 59.13" E	
				10	25° 17' 58.35" N	80° 37' 59.57" E	
				11	25° 17' 59.65" N	80° 37' 59.97" E	
				12	25° 17' 59.75" N	80° 37' 59.72" E	
				13	25° 17' 59.75" N	80° 37' 59.57" E	
				14	25° 17' 59.75" N	80° 37' 59.57" E	
				15	25° 17' 59.75" N	80° 37' 59.64" E	
16	कैन	परिवार	656	1	25° 17' 59.74" N	80° 37' 58.97" E	
				2	25° 17' 59.74" N	80° 37' 54.09" E	
				3	25° 17' 59.74" N	80° 37' 54.68" E	
				4	25° 17' 59.74" N	80° 37' 54.68" E	
17	कैन	परिवार	472/2	1	25° 17' 59.74" N	80° 37' 53.97" E	
				2	25° 17' 59.74" N	80° 37' 53.45" E	
				3	25° 17' 59.74" N	80° 37' 51.60" E	

State Level Environmental Impact  
 Assessment Authority, M.P.  
 (EPCA)  
 Paryavaran Parishar  
 E-5, Aeria Colony, Bhopal (M.P.)

State Level Environmental Impact  
Assessment Authority, M.P.

Parusvaran Parisar  
S-5, Ans - Colony, Bhopal (M.P.)

S.No.	क्रमांक	लोकसभा	उपनगर	उपनगरी	उपनगरी का नाम	उपनगरी का संख्या	LATTITUDE		LONGITUDE	
							उपनगरी का नाम	उपनगरी का संख्या	उपनगरी का नाम	उपनगरी का संख्या
24	केन	लोकसभा	उदयगढ़	405	A	35° 07' 12.57" N	80° 15' 44.11" E			
25	केन	लोकसभा	उदयगढ़	730	B	35° 05' 59.76" N	80° 15' 40.64" E			
					C	35° 07' 27.12" N	80° 14' 47.60" E			
					D	35° 07' 55.91" N	80° 14' 48.81" E			
					E	34° 59' 53.78" N	80° 15' 34.43" E			
					F	34° 58' 55.78" N	80° 15' 34.74" E			
					G	35° 01' 00.86" N	80° 17' 13.34" E			
					H	35° 01' 48.40" N	80° 17' 13.64" E			
					I	35° 01' 18.69" N	80° 17' 13.98" E			
					J	35° 00' 50.36" N	80° 17' 14.00" E			
					K	34° 59' 05.40" N	80° 17' 14.40" E			
					L	35° 03' 02.40" N	80° 17' 14.88" E			
					M	35° 02' 59.30" N	80° 17' 14.96" E			
					N	35° 02' 45.80" N	80° 17' 14.70" E			
					O	35° 02' 46.65" N	80° 17' 14.99" E			
					P	35° 03' 00.05" N	80° 17' 14.98" E			
					Q	35° 03' 05.26" N	80° 17' 14.01" E			
					R	35° 03' 00.33" N	80° 17' 14.23" E			
					S	35° 03' 11.94" N	80° 17' 17.97" E			


  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPAO)  
 Paryavaran Parishad  
 G-5, Arera Colony, Bhopal (M.P.)

**State Level Environmental Impact  
Assessment Authority, M.P.  
(EPCA)**  
F-5, A-2, S Colony, Parivar Parisar  
Bhopal (M.P.)

S.No.	Name of the Project	Location	Geographical Data		Report No.
			Latitude	Longitude	
27	केन	आलमगढ़	25°42'19.67"N	80°17'35.79"E	
			25°42'21.917"N	80°17'46.14"E	
			25°42'23.977"N	80°17'46.37"E	
			25°42'27.777"N	80°17'46.54"E	
			25°42'30.467"N	80°17'46.71"E	
			25°42'30.617"N	80°17'46.77"E	
			25°42'30.677"N	80°17'46.83"E	
			25°42'30.737"N	80°17'46.89"E	
			25°42'30.797"N	80°17'46.95"E	
			25°42'30.857"N	80°17'47.01"E	
			25°42'30.917"N	80°17'47.07"E	
			25°42'30.977"N	80°17'47.13"E	
			25°42'31.037"N	80°17'47.19"E	
			25°42'31.097"N	80°17'47.25"E	
			25°42'31.157"N	80°17'47.31"E	
			25°42'31.217"N	80°17'47.37"E	
			25°42'31.277"N	80°17'47.43"E	
			25°42'31.337"N	80°17'47.49"E	
			25°42'31.397"N	80°17'47.55"E	
			25°42'31.457"N	80°17'47.61"E	
			25°42'31.517"N	80°17'47.67"E	
			25°42'31.577"N	80°17'47.73"E	
			25°42'31.637"N	80°17'47.79"E	
			25°42'31.697"N	80°17'47.85"E	
			25°42'31.757"N	80°17'47.91"E	
			25°42'31.817"N	80°17'47.97"E	
28	फोनस	छताबुर	24°56'51.74"N	80°32'22.27"E	
			24°56'55.04"N	80°32'22.33"E	
			24°56'58.34"N	80°32'22.39"E	
			24°56'58.44"N	80°32'22.45"E	
			24°56'58.54"N	80°32'22.51"E	
			24°56'58.64"N	80°32'22.57"E	
			24°56'58.74"N	80°32'22.63"E	
			24°56'58.84"N	80°32'22.69"E	
			24°56'58.94"N	80°32'22.75"E	
			24°56'59.04"N	80°32'22.81"E	
			24°56'59.14"N	80°32'22.87"E	
			24°56'59.24"N	80°32'22.93"E	
			24°56'59.34"N	80°32'22.99"E	
			24°56'59.44"N	80°32'23.05"E	
			24°56'59.54"N	80°32'23.11"E	
			24°56'59.64"N	80°32'23.17"E	
			24°56'59.74"N	80°32'23.23"E	
			24°56'59.84"N	80°32'23.29"E	
			24°56'59.94"N	80°32'23.35"E	
			24°56'59.994"N	80°32'23.41"E	
29	कै	प्राप्ति	25°17'36.27"N	80°17'43.63"E	49512
			25°17'36.337"N	80°17'43.697"E	
			25°17'36.397"N	80°17'43.757"E	

S.No.	क्रमांक	पर्यावरणीय अवस्था	संकेत	लोकसमुदाय	LATITUDE		LONGITUDE	
					EP. No.	EP. No.	EP. No.	EP. No.
30	कृषि	अन्य	संकेत	संकेत	1460	854	139° 53' 35.7" E	25° 15' 42.8" N
31	जैव	अन्य	संकेत	संकेत	क्रमांक नं 2		139° 53' 35.7" E	25° 15' 42.8" N
32	जैविक	अन्य	संकेत	संकेत	कृषि	237	139° 53' 35.7" E	25° 15' 42.8" N
33	चरोंनिक	अन्य	संकेत	संकेत	निगमनी	971, 1011	139° 53' 35.7" E	25° 15' 42.8" N
34	चारोंनिक	अन्य	संकेत	संकेत	कृषि	21011	139° 53' 35.7" E	25° 15' 42.8" N

State Level Environmental Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivartan Parivar  
E-5, Aroha Colony, Bhopal (M.P.)

3	26°35'21.875N	79°45'59.500E		
4	26°35'21.875N	79°45'59.500E		
5	26°35'21.875N	79°45'59.500E		
6	26°35'21.875N	79°45'59.500E		
7	26°35'21.875N	79°45'59.500E		
8	26°35'21.875N	79°45'59.500E		
9	26°35'21.875N	79°45'59.500E		
10	26°35'21.875N	79°45'59.500E		
11	26°35'21.875N	79°45'59.500E		
12	26°35'21.875N	79°45'59.500E		
13	26°35'21.875N	79°45'59.500E		
14	26°35'21.875N	79°45'59.500E		
15	पर्यावरण विभाग	पर्यावरण विभाग		
16	पर्यावरण विभाग	पर्यावरण विभाग		
17	पर्यावरण विभाग	पर्यावरण विभाग		
18	पर्यावरण विभाग	पर्यावरण विभाग		
19	पर्यावरण विभाग	पर्यावरण विभाग		
20	पर्यावरण विभाग	पर्यावरण विभाग		
21	पर्यावरण विभाग	पर्यावरण विभाग		
22	पर्यावरण विभाग	पर्यावरण विभाग		
23	पर्यावरण विभाग	पर्यावरण विभाग		
24	पर्यावरण विभाग	पर्यावरण विभाग		
25	पर्यावरण विभाग	पर्यावरण विभाग		
26	पर्यावरण विभाग	पर्यावरण विभाग		
27	पर्यावरण विभाग	पर्यावरण विभाग		
28	पर्यावरण विभाग	पर्यावरण विभाग		
29	पर्यावरण विभाग	पर्यावरण विभाग		
30	पर्यावरण विभाग	पर्यावरण विभाग		
31	पर्यावरण विभाग	पर्यावरण विभाग		
32	पर्यावरण विभाग	पर्यावरण विभाग		
33	पर्यावरण विभाग	पर्यावरण विभाग		
34	पर्यावरण विभाग	पर्यावरण विभाग		
35	पर्यावरण विभाग	पर्यावरण विभाग		
36	पर्यावरण विभाग	पर्यावरण विभाग	1063	
37	पर्यावरण विभाग	पर्यावरण विभाग		
38	पर्यावरण विभाग	पर्यावरण विभाग	574	

  
 State Level Environment Impact  
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S.No.	परिवास	परिवास संख्या	वासस्थान	वासस्थान संख्या	LATITUDE		LONGITUDE	
					EPIC No.	Latitude	EPIC No.	Longitude
39	परिवास	परिवास-१	गोपनीय	गोपनीय-१	1	24° 56' 31" N	79° 16' 43" E	
					2	24° 56' 31" N	79° 16' 47" E	
					3	24° 57' 05" N	79° 16' 47" E	
					4	24° 57' 05" N	79° 16' 50" E	
					5	24° 57' 37" N	79° 16' 50" E	
					6	24° 57' 37" N	79° 16' 54" E	
					7	24° 57' 40" N	79° 16' 54" E	
					8	24° 57' 40" N	79° 16' 57" E	
40	परिवास	परिवास-२	गोपनीय	गोपनीय-१	1	24° 57' 40" N	79° 17' 01" E	
					2	24° 57' 40" N	79° 17' 01" E	
					3	24° 57' 44" N	79° 17' 01" E	
					4	24° 57' 45" N	79° 17' 01" E	
41	परिवास	परिवास-३	गोपनीय	गोपनीय-१	1	24° 58' 01" N	79° 17' 04" E	
					2	24° 58' 01" N	79° 17' 04" E	
					3	24° 58' 05" N	79° 17' 04" E	
					4	24° 58' 05" N	79° 17' 04" E	
					5	24° 58' 23" N	79° 17' 04" E	
					6	24° 58' 30" N	79° 17' 04" E	
					7	24° 58' 30" N	79° 17' 04" E	
					8	24° 58' 33" N	79° 17' 04" E	
					9	24° 58' 33" N	79° 17' 04" E	
					10	24° 58' 33" N	79° 17' 04" E	
					11	24° 58' 37" N	79° 17' 04" E	
					12	24° 58' 37" N	79° 17' 04" E	
					13	24° 58' 34" N	79° 17' 04" E	
					14	24° 58' 04" E	79° 17' 04" E	
					15	24° 58' 05" N	79° 17' 04" E	
					16	24° 58' 05" N	79° 17' 04" E	
					17	24° 57' 58" N	79° 17' 04" E	
					18	24° 57' 58" N	79° 17' 04" E	
					19	24° 57' 58" N	79° 17' 04" E	
					20	24° 57' 58" N	79° 17' 04" E	
					21	24° 57' 58" N	79° 17' 04" E	
					22	24° 57' 50" N	79° 17' 04" E	
					23	24° 57' 56" N	79° 17' 04" E	
42	परिवास	परिवास-४	गोपनीय	गोपनीय-१	128			


  
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State Level Environmental Impact Assessment Authority, M.P.

**(EFCO)**  
Parivarayan Parisar  
E-5, Acerz Colony, Bhopal (M.P.)

S.No.	Name	Address	Lat Long	
			Latitude	Longitude
53.369	सराया	विजयनगर	24°49'10.567"N 31°45'01.311"E	79°35'26.557"E
			24°49'49.897"N 31°45'02.447"E	79°35'27.487"E
			24°49'57.075"N 31°45'02.357"E	79°35'28.017"E
			24°49'57.075"N 31°45'03.357"E	79°35'27.417"E
			24°49'59.142"N 31°45'03.357"E	79°35'27.417"E
			24°49'59.142"N 31°45'03.677"E	79°35'26.997"E
			24°49'59.339"N 31°45'03.357"E	79°35'26.557"E
			24°49'49.345"N 31°45'02.887"E	79°35'29.457"E
			24°49'48.867"N 31°45'02.887"E	79°35'29.187"E
			24°49'55.657"N 31°45'02.887"E	79°35'28.287"E
			24°49'59.597"N 31°45'02.887"E	79°35'27.147"E
			24°49'59.597"N 31°45'02.887"E	79°35'27.227"E
			24°49'59.597"N 31°45'02.887"E	79°35'27.247"E
			24°49'59.13078"N 31°45'02.887"E	79°35'27.357"E
			24°49'59.13078"N 31°45'02.887"E	79°35'27.357"E
332	प्रभारी	विजयनगर	24°49'51.047"N 31°45'02.887"E	79°35'27.407"E
			24°49'51.047"N 31°45'02.887"E	79°35'27.407"E
			24°49'52.687"N 31°45'02.887"E	79°35'27.407"E
45	कृष्ण	विजयनगर	24°49'51.74578"N 31°45'02.337"E	79°35'28.227"E
			24°49'51.74578"N 31°45'02.337"E	79°35'28.227"E
46	करम	विजयनगर	24°49'51.04781"N 31°45'01.417"E	79°35'28.337"E
			24°49'51.04781"N 31°45'01.417"E	79°35'28.337"E

  
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 Chhatri Colony, Bhopal (M.P.)

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State Level Environment Impact  
Assessment Authority, M.P.

(EPCO) Paryavaran Parishad  
E-5, Aerial Colony, Bhopal (M.P.)

जिला छतरपुर - खोदू-भक्त खदानों का व्योरा							
समूह का नाम - समूह क्रमांक-1 (तहसील का नाम - गौरिहार)							
क्र.	जिला	तहसील का नाम	ग्राम	खसरा नं०	अनुमानित रकमा है०	रेत का अनुमानित भण्डार (घ.मी.)	रिमार्क
1	2	3	4	5	6	7	8
1	छतरपुर	गौरिहार	मवईधाट	73/3/1/2, 48/9/2	1.000	12,000	मवईधाट
2	छतरपुर	गौरिहार	फतेहपुर	295/3/1, 295/3/2	1.330	12,000	फतेहपुर
3	छतरपुर	गौरिहार	सिंगारपुर	148/5/ख	1.000	12,000	सिंगारपुर-1
4	छतरपुर	गौरिहार	सिंगारपुर	64/5	1.000	12,000	सिंगारपुर-2
5	छतरपुर	गौरिहार	अजीतपुर	488/4/17	1.000	12,000	अजीतपुर
6	छतरपुर	गौरिहार	बारबंद	253/1/2/1	1.000	12,000	बारबंद
				कुल	6.330	72,000	

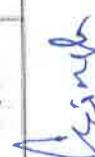
State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parisar  
 E-5, Arera Colony, Bhopal (M.P.)

**Results of Replenishment Study of Leases in Chittarpur District**

SL. No	River	लिला	राहसीद का नाम	ग्राम	खस्तगी नंबर	एकमात्र हेटो	रेत का अनुकूलित भृष्टार (घमी)	Area in Sq.M.	New sustainable Standard depth observed on post monsoon scenario (M)			Quantity In Cu.M.
									4	5	6	7
2	3	4	5	306/1	3.100	10,000	31000	3	93000			
1	केत	छतरपुर	गौड़ियर	जामपुर	1540/1	10,000	25,000	100000	3	3,00,000		
2	केन	छतरपुर	गौड़ियर	पठवार-1	396/2	14,000	1,50,000	140000	3	4,20,000		
3	केन	छतरपुर	गौड़ियर	मर्वाइथाट-1	609	3,990	15,000	39900	3	1,19,700		
4	केन	छतरपुर	गौड़ियर	बरुआ	1298/1	2,150	8,000	21500	3	64,500		
5	केत	छतरपुर	गौड़ियर	तेखना	613/1	5,000	60,000	50000	3	1,50,000		
6	केन	छतरपुर	गौड़ियर	परेह-1	1540/1	6,000	20,000	60000	3	1,80,000		
7	केन	छतरपुर	गौड़ियर	पठवार-2	39	7,000	50,000	70000	3	2,10,000		
8	केन	छतरपुर	गौड़ियर	मर्वाइथाट-2								


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8	केन	छतरपुर	गौडिकर	फोर्क्स-2	561	10,000	70,000	100,000	3	3,00,000
10	केन	छतरपुर	गौडिकर	सम्पुर्णाट	2	4,000	28,000	40,000	3	1,20,000
11	केन	छतरपुर	गौडिकर	वारदं-3	4722	4,000	50,000	40,000	3	1,20,000
12	केन	छतरपुर	गौडिकर	कन्देला	48	1,500	12,000	15,000	3	45,000
13	केन	छतरपुर	गौडिकर	गोयरा-1	253 1/13	4,000	50,000	40,000	3	1,20,000
14	केन	छतरपुर	गौडिकर	यारीखेड़ा	269/23 I	10,000	70,000	100,000	3	3,00,000
15	केन	छतरपुर	गौडिकर	महवाया	1163	4,000	20,000	40,000	3	1,20,000
16	केन	छतरपुर	गौडिकर	अजीतपुर	656	4,000	22,000	40,000	3	1,20,000
17	केन	छतरपुर	गौडिकर	वारदं-4	472 / 2	10,000	80,000	100,000	3	3,00,000
18	केन	छतरपुर	गौडिकर	गोयरा-2	253 1/13	10,000	80,000	100,000	3	3,00,000
19	केन	छतरपुर	गौडिकर	फलोपुर	22	2,000	40,000	20,000	3	60,000
20	केन	छतरपुर	गौडिकर	धांगरारेत खदान	332	5,200	70,000	52,000	3	1,56,000
21	केन	छतरपुर	गौडिकर	नेहरा	697/1	14,000	1,00,000	140,000	3	4,20,000
22	केन	छतरपुर	गौडिकर	वारदं नं० 1	4722	12,000	50,000	120,000	3	3,60,000
23	केन	छतरपुर	गौडिकर	वारदं नं० 2	4722	12,000	50,000	120,000	3	3,60,000

  
 State Level Environment Impact  
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 E-5, Arctic Colony, Bhopal (M.P.)

24	केन	छतरपुर	चंदवा	लसगरया	405	12,600	50,000.00	126000	3	3,78,000
25	केन	छतरपुर	चंदवा	बजारी	730	12,300	55,000.00	123000	3	3,69,000
26	केन	छतरपुर	चंदवा	हर्दौ	277/1	12,500	65,000.00	125000	3	3,75,000
27	केन	छतरपुर	चंदवा	बाजारी-1	854	11,500	75,000.00	115000	3	3,45,500
28	उरमिल	छतरपुर	चंदवा	सूरजपुर	818	4,000	15,000.00	40000	3	1,20,000
29	केन	छतरपुर	चंदवा	हिनोता	495/2	4,000	20,000.00	40000	3	1,20,000
30	केन	छतरपुर	चंदवा	सड़कर	1403	4,000	35,000.00	40000	3	1,20,000
31	केन	छतरपुर	चंदवा	बाजारी नं० 2	854	8,000	8,000.00	80000	3	2,40,000
32	उरमिल	छतरपुर	राजननर	सुरा	257	2,800	12,000.00	28000	3	84,000
33	उरमिल	छतरपुर	शजनार	झिनीनी	971, 1011	4,000	12,000.00	40000	3	1,20,000
34	उरमिल	छतरपुर	शजनार	कुरेला	2/1011	4,000	10,000.00	40000	3	1,20,000
35	बहे	छतरपुर	शजनार	कुटिया	1	2,100	12,000.00	21000	3	63,000
36	उरमिल	छतरपुर	लखनपुरनगर	झगमऊ	1063	4,200	10,000.00	42000	3	1,26,000
37	धन्तान	छतरपुर	नैनीव	करारागर	1	7,000	25,000.00	70000	3	2,10,000
38	धन्तान	छतरपुर	नैनीवं	टीला-2	574	6,000	30,000.00	60000	3	1,80,000

State Level Environment Impact  
Assessment Authority, M.P.  
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E.S. Area Colony, Bhopal (M.P.)

39	धारान	छतरपुर	नीगम	अलीपुरा-2	2113	7,000	50,000.00	70000	3	2,10,000
40	धारान	छतरपुर	नीगम	टीका-1	574	4,000	45,000.00	40000	3	1,20,000
41	धारान	छतरपुर	नीमदे	अलीपुरा-1	2113	4,000	35,000.00	40000	3	1,20,000
42	धारान	छतरपुर	बजामहेश	मौरा (सिंजवाहा)	128	3,520	35,000.00	35200	3	1,05,600
43	वन्ने	छतरपुर	दिल्ली	नासयणपुरा	189, 658	2,000	15,000.00	20000	3	60,000
44	वन्ने	छतरपुर	विजापुर	लिंगामनुरा	53, 369	2,000	13,000.00	20000	3	60,000
45	वन्ने	छतरपुर	किंचकर	अमरपुरा	332	1,500	12,000.00	15000	3	45,000
46	तरंगेर	छतरपुर	करामुर	दिव्येन	818	2,500	10,000.00	25000	3	75,000
47	तरंगेर	छतरपुर	छतरपुर	चम्पुर (कुरी)	701	1,400	10,000.00	14000	3	42,000
48	दुरहा	छतरपुर	छतरपुर	कदरी	672	1,500	12,000.00	15000	3	45,000

Note:-The availability of Replenished Mineral along with depth of total deposit in post-mining scenario was investigated by district sub-divisional committee. The results of lease wise investigation is tabulated in the above Table - A-9/Chattarpur/Replenishment/Reservc.



State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)

Paryavaran Parisar  
5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhattarpur

### (17) Details of the Occupational Health issues in the District:

Open cast method involves dust generation by excavation, loading and transportation of mineral. Atsite, during excavation and loading activity, dust is main pollutant which affects the health of workers whereas environmental and climatic conditions also generate the health problems. Addressing the occupational health hazard means gaining an understanding of the source (its location and magnitude or concentration), identifying an exposure pathway (e.g., a means to get it in contact with someone), and determination of likely a receptor (someone receiving the stuff that is migrating).

Occupational hazard due to open cast mining mainly comes under the physical hazards. Possible physical hazards are as below:-

#### Physical Hazards due to Mining Operations:

Following health related hazards were identified in open cast mining operations to the workers:

**Light:** - The workers may be exposed to the risk of poor illumination or excessive brightness. The effects are eye strain, headache, eye pain and lacrimation, congestion around the cornea and eye fatigue. In present case, the mining activity is done during day time only.

**Heat and Humidity:** - The most common physical hazard is heat. The direct effects of heat exposure are burns, heat exhaustion, heat stroke and heat cramps; the indirect effects are decreased efficiency, increased fatigue and enhanced accident rates. Heat and humidity are encountered in hot and humid condition when temperatures and air temperatures increase in summer time up to 46.10C or above in the river bed mining area.

**Eye Irritation:** - During the high windy days in summer the dust could be the problems for eyes like itching and watering of eyes.

**Respiratory Problems:** - Large amounts of dust in air can be a health hazard, exacerbating respiratory disorders such as asthma and irritating the lungs and bronchial passages.

**Noise Induced Hearing Loss:** - Machinery is the twin source of noise pollution at the mine site.

*Kainth*  
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## District Survey Report: Chhatarpur

**Risk Level using Risk Matrix:** Risk Matrix is used to identify the level of risk involved in various hazards identified.

Chhatarpur District has 10 CHCs and 36 PHCs, which are located very well in each block of the district, district also has 2 hospitals, one in Khajuraho and one in Bijawar. All the CHCs are equipped with 1 ambulance and 30-35 beds respectively, while PHCs consist 10-15 beds and having no ambulance. District also has 195 ANM workers, who are well trained for first aid and primary care.

**Table 29 Number of Health Centres in Raisen District**

S. No.	Block Name	Health Centre/Hospital	Units	Description
1.	Iasnagar	No. of Primary Health Centers (PHCs):	3	No. of medical officers: 1 No. of nurses, compounders (medical/ paramedical staff): 11 No. of available ambulances: 0 No. of beds: 30-35
2.		No. of Community Health Centers (CHCs):	1	No. of medical officers: 1 No. of nurses, compounders (medical/ paramedical staff): 4 No. of available ambulances: 1 No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 27 Total No. of medical stores in the block: 15
3.	Badamnlehra	No. of Primary Health Centers (PHCs):	4	No. of medical officers: 2 No. of nurses, compounders (medical/ paramedical staff): 6 No. of available ambulances: 0 No. of beds: 30-35
4.		No. of Community Health Centers (CHCs):	1	PGMO: 1 No. of medical officers: 0 No. of nurses, compounders (medical/ paramedical staff): 4 No. of available ambulances: 1 <i>(Slight Environmental Impact)</i>

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## District Survey Report: Chhatarpur

				No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 17 Total No. of medical stores in the block: 5
5	Borigarh	No. of Primary Health Centers (PHCs):	4	No. of medical officers: 2 No. of nurses, compounders (medical/ paramedical staff): 7 No. of available ambulances: 0 No. of beds: 40-45
6.		No. of Community Health Centers (CHCs):	1	PGMO: 1 No. of medical officers: 0 No. of nurses, compounders (medical/ paramedical staff): 6 No. of available ambulances: 1 No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 21 Total No. of medical stores in the block: 5
7.	Buxwaha	No. of Primary Health Centers (PHCs): 1	1	No. of medical officers: 0 No. of nurses, compounders (medical/ paramedical staff): 1 No. of available ambulances: 0 No. of beds: 10
8.		No. of Community Health Centers (CHCs):	1	PGMO: 2 No. of medical officers: 0 No. of nurses, compounders (medical/ paramedical staff): 6 No. of available ambulances: 1 No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 12 Total No. of medical stores in the block: 4
9	Rajnagar	No. of Primary Health Centers (PHCs):	8	No. of medical officers: 7 No. of nurses, compounders (medical/ paramedical staff): 30 No. of

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parisar  
 E-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

				available ambulances: 2 No. of beds: 80-90 No. of trained first aid volunteers in the block and ANM: 33 Total No. of medical stores in the block: 10
10.	Nawgaon	No. of Primary Health Centers (PHCs):	7	No. of medical officers: 6 No. of nurses, compounders (medical/paramedical staff): 1 No. of available ambulances: 0 No. of beds: 70-80
11.		No. of Community Health Centers (CHCs):	1	No. of medical officers: 2 PGMO: 2 Child Specialist: 1 No. of nurses, compounders (medical/paramedical staff) 18 No. of available ambulances: 3 No. of beds: 40 No. of trained first aid volunteers in the block and ANM: 26 Total No. of medical stores in the block: 10
12.	Satal (Bijawar)	No. of Primary Health Centers (PHCs):	5	No. of medical officers: 5 No. of nurses, compounders (medical/paramedical staff): 16 No. of available ambulances: 0 No. of beds: 50
13.		No. of Community Health Centers (CHCs): 1	1	PGMO: 1 No. of nurses, compounders (medical/paramedical staff): 7 No. of available ambulances: 2 No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 19 Total No. of medical stores in the block: 10

State Level Environment Impact

Assessment Authority, M.P.

(EFCO)

Parivartan Parivar  
G-5, Atara Colony, Bhogal (M.P.)

## District Survey Report: Chhatarpur

14.	Laundi	No. of Primary Health Centers (PHCs):	3	No. of medical officers: 2 PGMO; 1 No. of nurses, compounders (medical/ paramedical staff): 8 No. of available ambulances: 0 No. of beds: 30-35
15.		No. of Community Health Centers (CHCs)	2	No. of medical officers: 1 No. of nurses, compounders (medical/ paramedical staff): 10 No. of available ambulances: 1 No. of beds: 30-35 No. of trained first aid volunteers in the block and ANM: 20 Total No. of medical stores in the block: 10
16.	Khajuraho	No. of Hospitals:	1	No. of medical officers: 2 No. of nurses, compounders (medical/ paramedical staff): 6 No. of available ambulances: 0 No. of beds: 10-15

Malaria control in Madhya Pradesh is complex because of vast tracts of forest with tribal settlement. Fifty four million individuals of various ethnic origins, accounting for 8% of the total population of India, contributed 30% of total malaria cases, 60% of total falciparum cases and 50% of malaria deaths in the country. Ambitious goals to control tribal malaria by launching "Enhanced Malaria Control Project" (EMCP) by the National Vector Borne Disease Control Programme (NVBDCP), with the World Bank assistance, became effective in September 1997 in eight north Indian states. Under EMCP, the programme used a broader mix of new interventions, i.e. insecticide-treated bed nets, spraying houses with effective residual insecticides, use of larvivorous fishes, rapid diagnostic tests for prompt diagnosis, treatment of the sick with effective radical treatment and increased public awareness and IEC.

The strategic plan will serve as the guide to all the districts and the state of Madhya Pradesh to achieve the TB elimination goals. Success of this endeavour will be an important chapter in the history of control of infectious diseases.

*[Signature]*  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (SLEIA)  
 Panchayati Rajisthan  
 S. A. U. Udayan, Udaipur (M.P.)

## District Survey Report: Chhatarpur

Tuberculosis is a disease dreaded due to its social consequences and age old myths and misconceptions regarding its transmission and treatment. It is more often misreated by the unqualified and untrained thus leading to patients suffering physically and monetarily. Elimination of Tuberculosis will entail mammoth efforts by each and every stakeholder involved. The launch of this document provides with the necessary roadmap and momentum, in direction of meeting the goals specified.

**Table 30 National T.B. Elimination Programme (2021)**

Case Notifications 2021									
Public				Private				Total	
Name of TU	Annual Target	Achievement %	Age	Annual Target	Achievement %	Age	Annual Target	Achievement %	Age
Bijawar	380	179	47	0	0	0	380	179	47
Chhatarpur	840	1050	123	1200	1190	99	3040	2240	110
Lav Kush Nagar	480	285	59	0	0	0	480	285	59
Newlong	1200	1605	134	6500	11985	184	7700	13590	176
District	2900	3119	107	7500	13175	176	10400	16294	157

Total Notification	Chhatarpur	Outside district	Total Notification	Chhatarpur	Outside district
3119	2371	748 (24%)	13175	1309	10066 (76.6%)

Year	Total Notified
	Public Sector
2017	2834
2018	2979
2019	1607
2020	4227
2021	3004
2022	421

*See*

State Level Environment Impact  
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 (EPCA)  
 Parivartan Parishad  
 B-5, Arera Colony, Bhopal (M.P.)

## District Survey Report: Chhatarpur

### (18) Plantation and Green Belt Development in respect of lease granted in the District:

Mining activities result in pollution of the environment. This requires protection of our environment. Plantation is the oldest technology for the restoration of the land damaged by the human activities as well as air pollution.

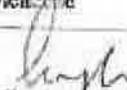
Trees are highly suitable for the detection and monitoring of the air pollutants and have been effectively used at various places.

By planting trees we can achieve the dual purpose of bioaesthetics as well as mitigation of pollution. Proper planning and plantation scheme depends upon the magnitude and type of pollution, selection of pollution tolerant and dust capturing plants.

The plants should be ever green, large leaved, with rough bark, ecologically compatible, with low water requirement, requiring minimum care, capable to absorb pollutants, pollutant resistant, agro climatically suitable, fast growing, free from wind throw and breakage and with high pollution tolerance index. The species should be suitable to the climate, topography and soil. A minimum two rows of plantation will be carried out to minimize the effect of pollution. This would attenuate the pollutants level.

**Table 31 Recommended Plant species for green belt development/plantation.**

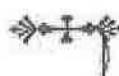
S.No.	Botanical Name	Family	Common Name
1.	Bougainvillea glabra Choisy	Nyctaginaceae	Boogenbel
2.	Hibiscus rosa-sinensis L.	Malvaceae	Gurhal
3.	Nerium indicum Mill	Apocynaceae	Kaner
4.	Plumeria rubra L	Apocynaceae	Champa
5.	Tabernaemontana divaricata (L.) R. Br. Ex Roem. & Schult	Apocynaceae	Chandni
6.	Ailanthus excels Roxb.	Simaroubaceae	Maha nimbi
7.	Alstonia scholaris (L.) R.Br	Apocynaceae	Chitvan
8.	Cassia Fistula L.	Caesalpiniaceae	Amaltas
9.	Butea monosperma (Lamk) Taub	Fabaceae	Khukra/ Palash
10	Nyctanthes arbor-tristis L.	Oleaceae	Harsingar

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (SLEIA)  
 Paryavaran Bhawan  
 B-5, Akash Colony, Bhopal (M.P.)

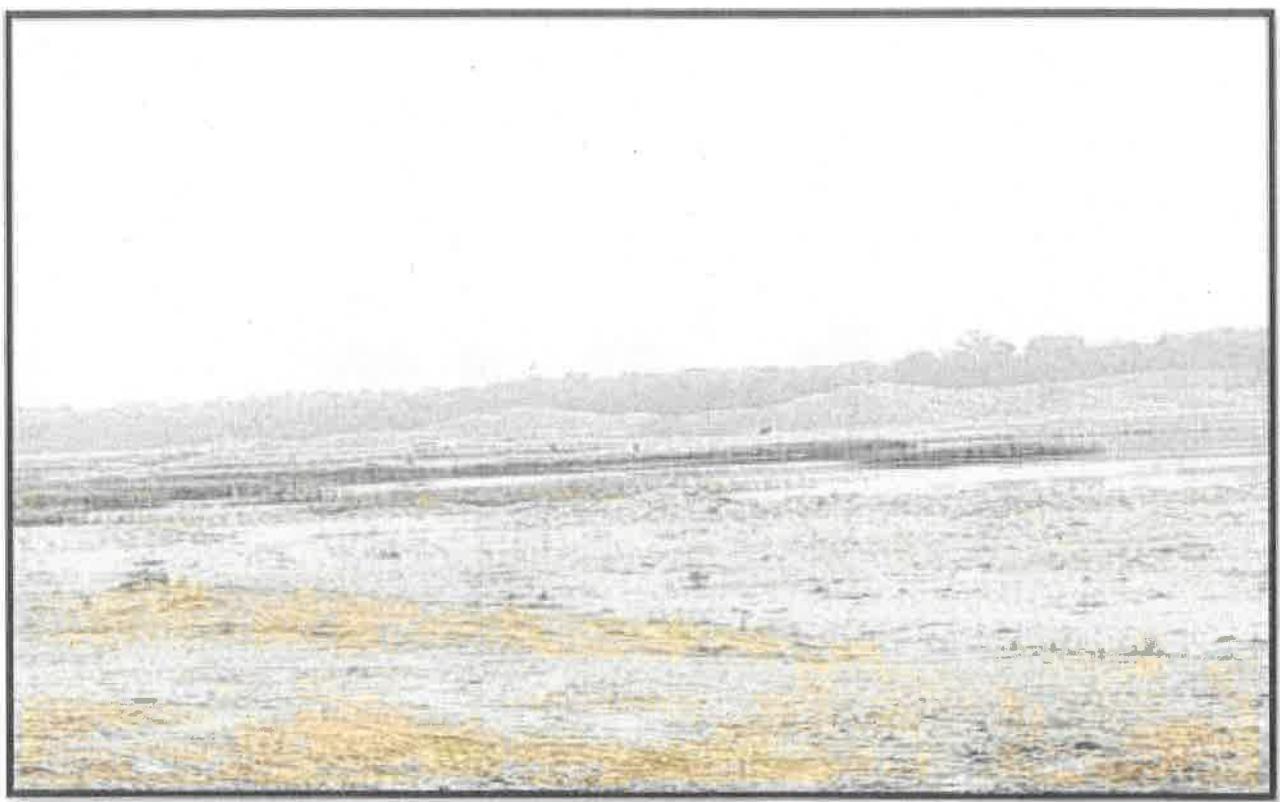
## District Survey Report: Chhatarpur

11.	<i>Azadirachta indica</i> A. Juss	Meliaceae	Neem
12.	<i>Ficus religiosa</i> L.	Moraceae	Pipal
13.	<i>Pterospermum acerifolium</i> Willd	Sapotaceae	Kamuk Champa
14.	<i>Tectona grandis</i> L.	Verbenaceae	Teak/ Sagon
15.	<i>Terminalia catappa</i> L.	Combretaceae	Jangli badam
16.	<i>Ziziphus mauritiana</i> Lamk.	Rhamnaceae	Bada ber

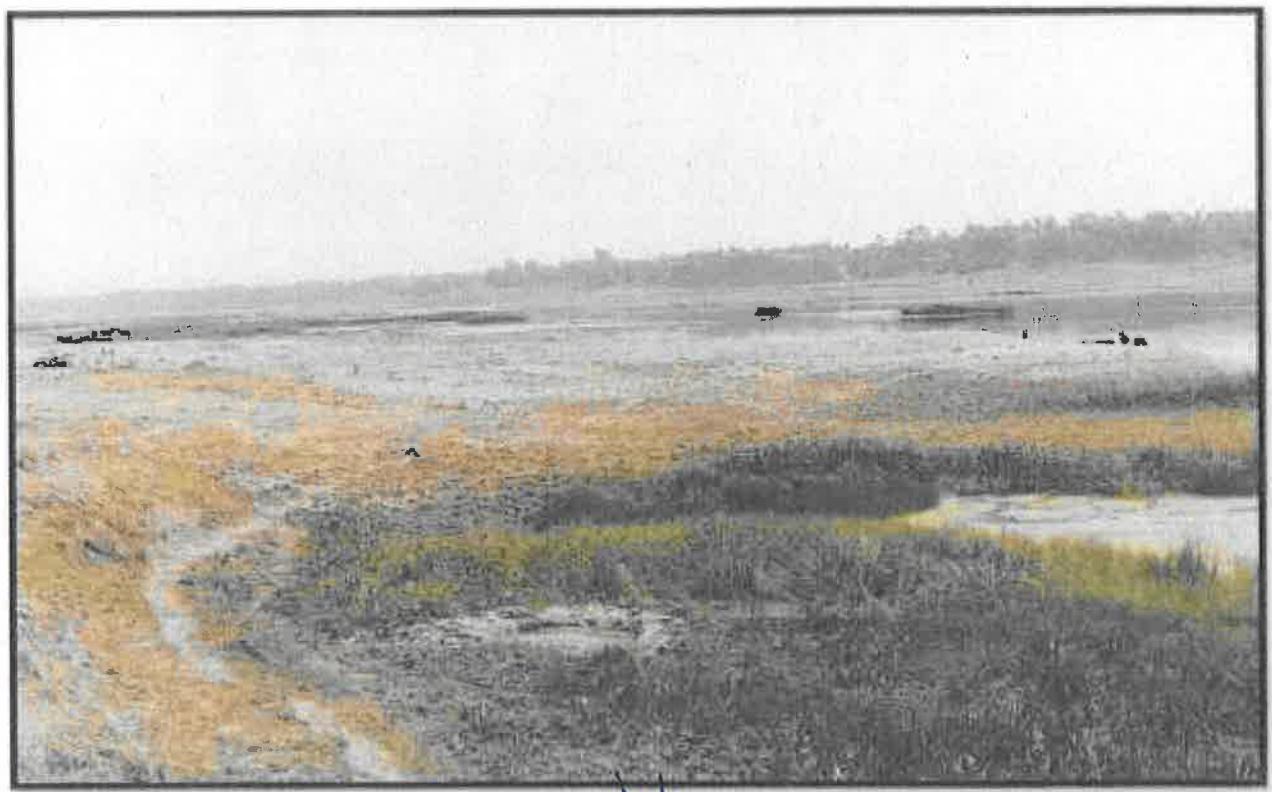
Plantation has been done by project proponent on Barrier Zone, Non Mining Area, Approach road, nearby river bank and ravines etc. as per the suggestions of the authority

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parivartan  
 G.B. Arora Colony, Bhopal (M.P.)

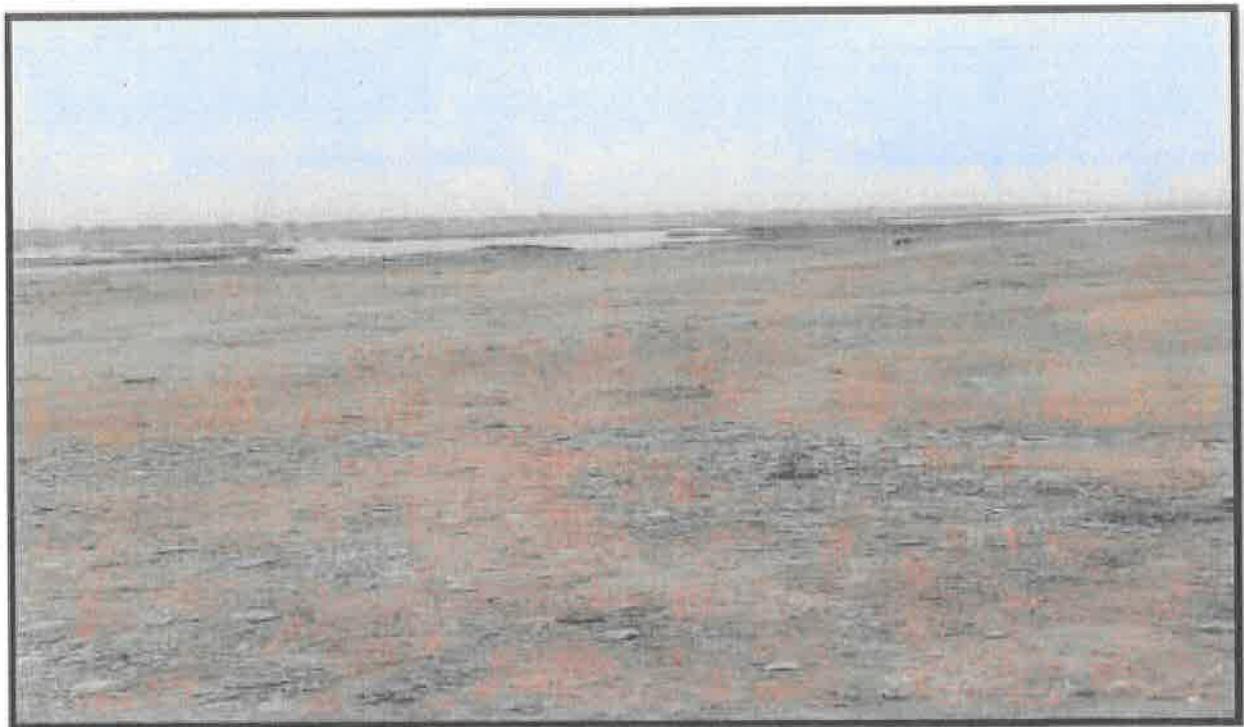
**PHOTOGRAPHS OF**  
**SAND MINES IN**  
**CHHATARPUR**  
**DISTRICT**



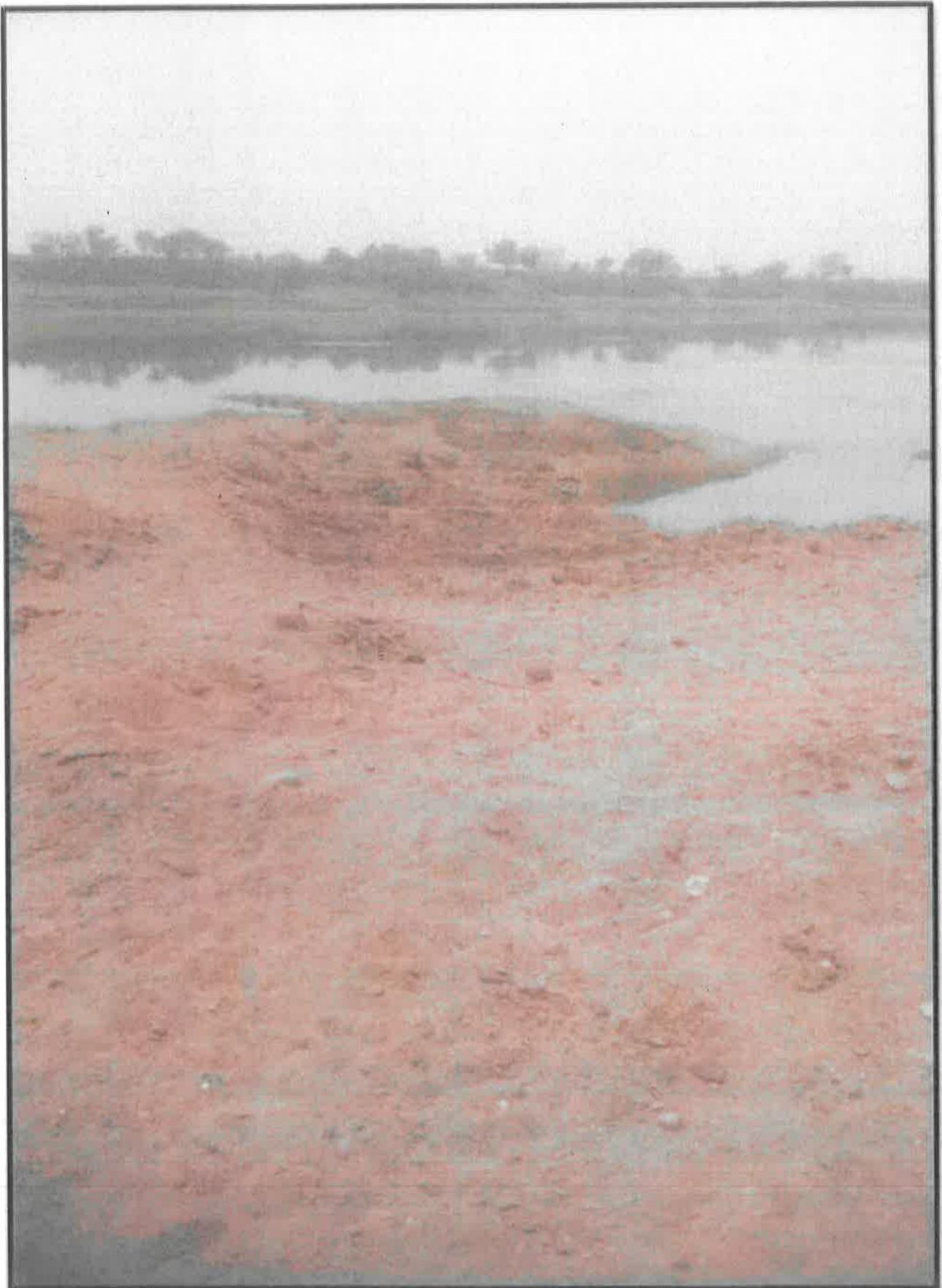
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



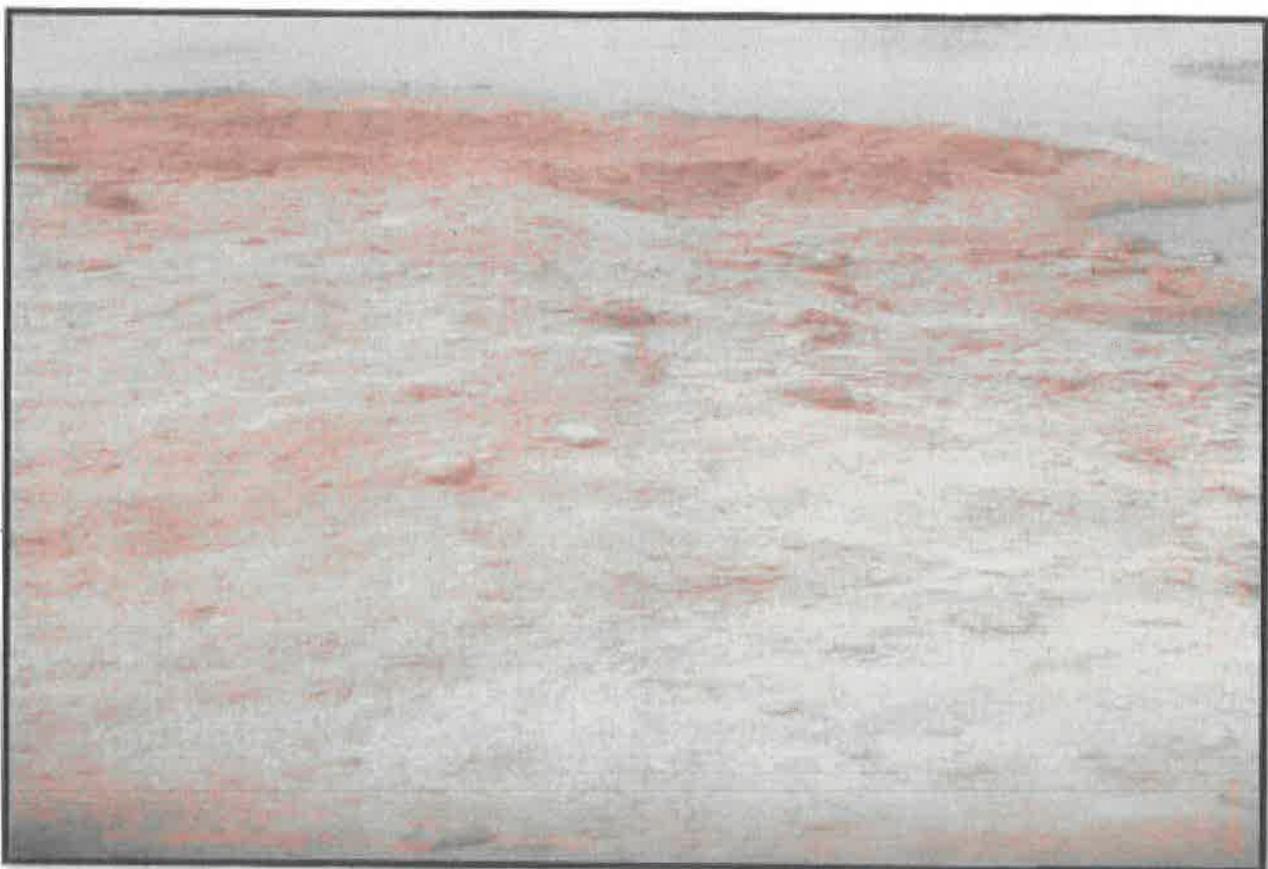
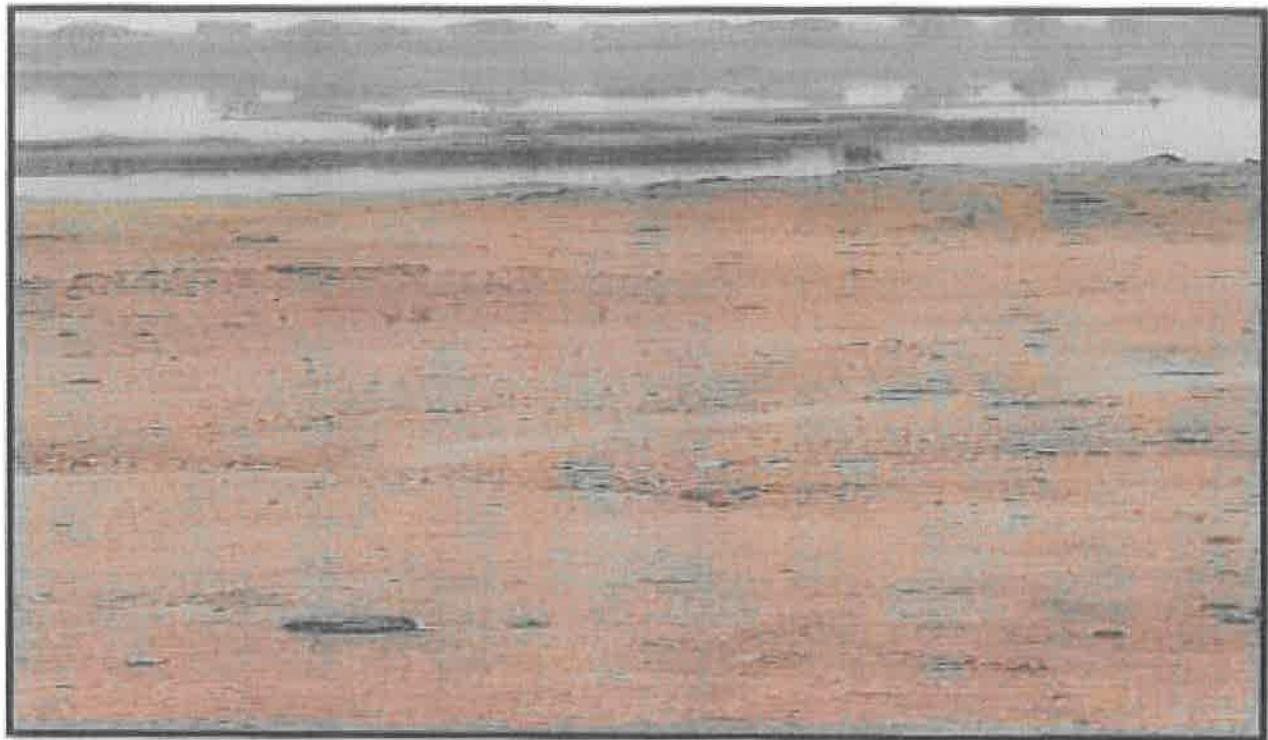
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Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)



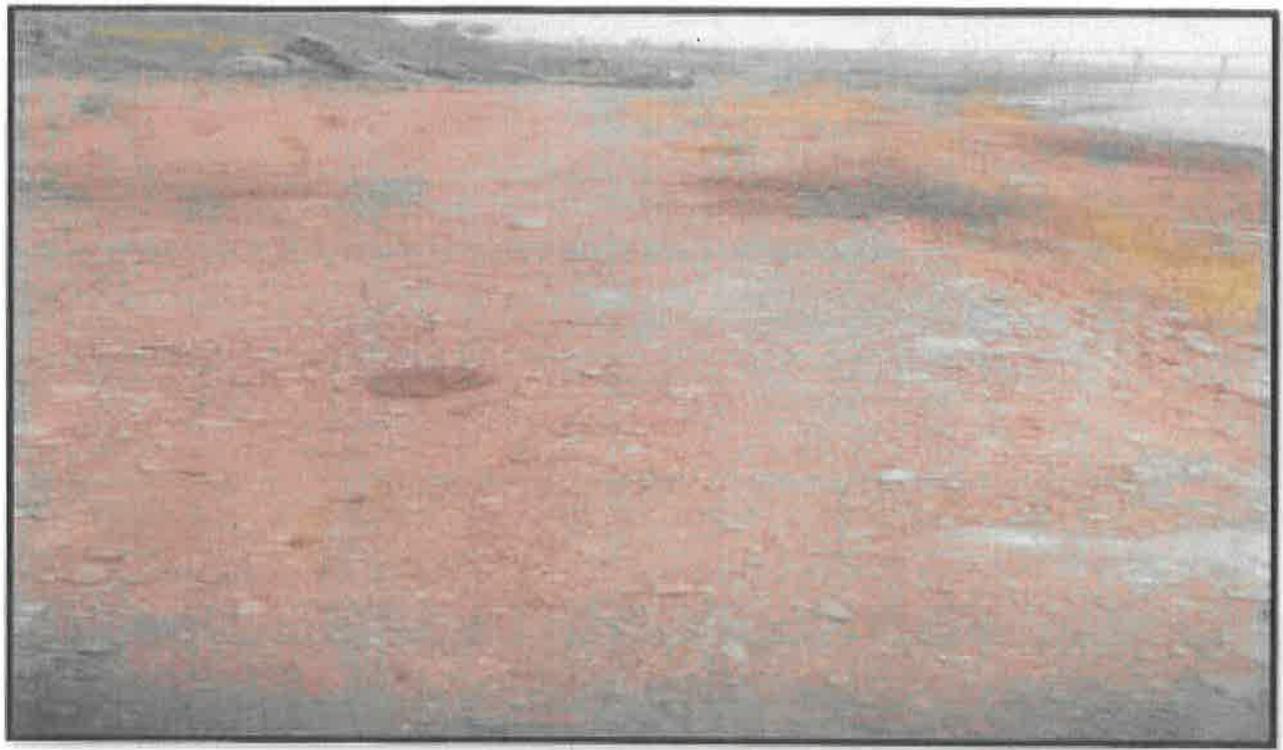
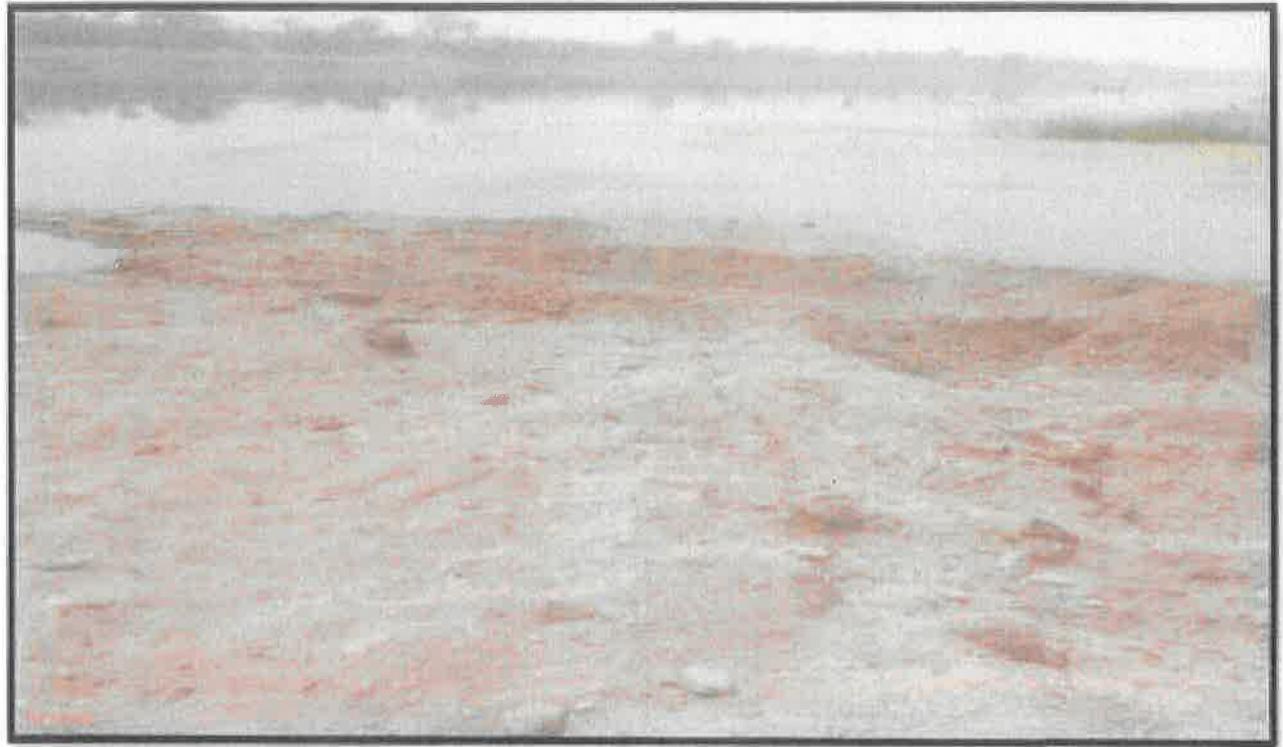
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Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



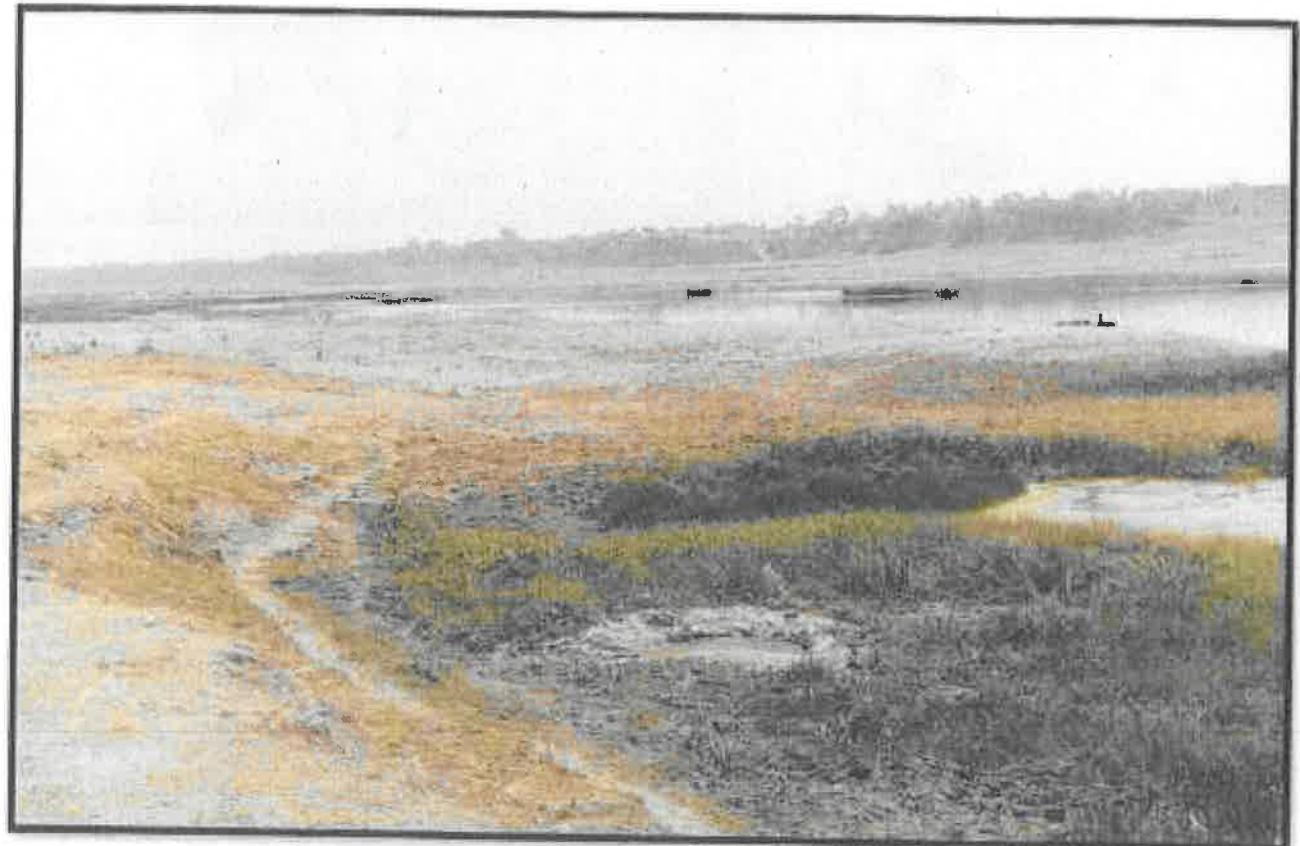
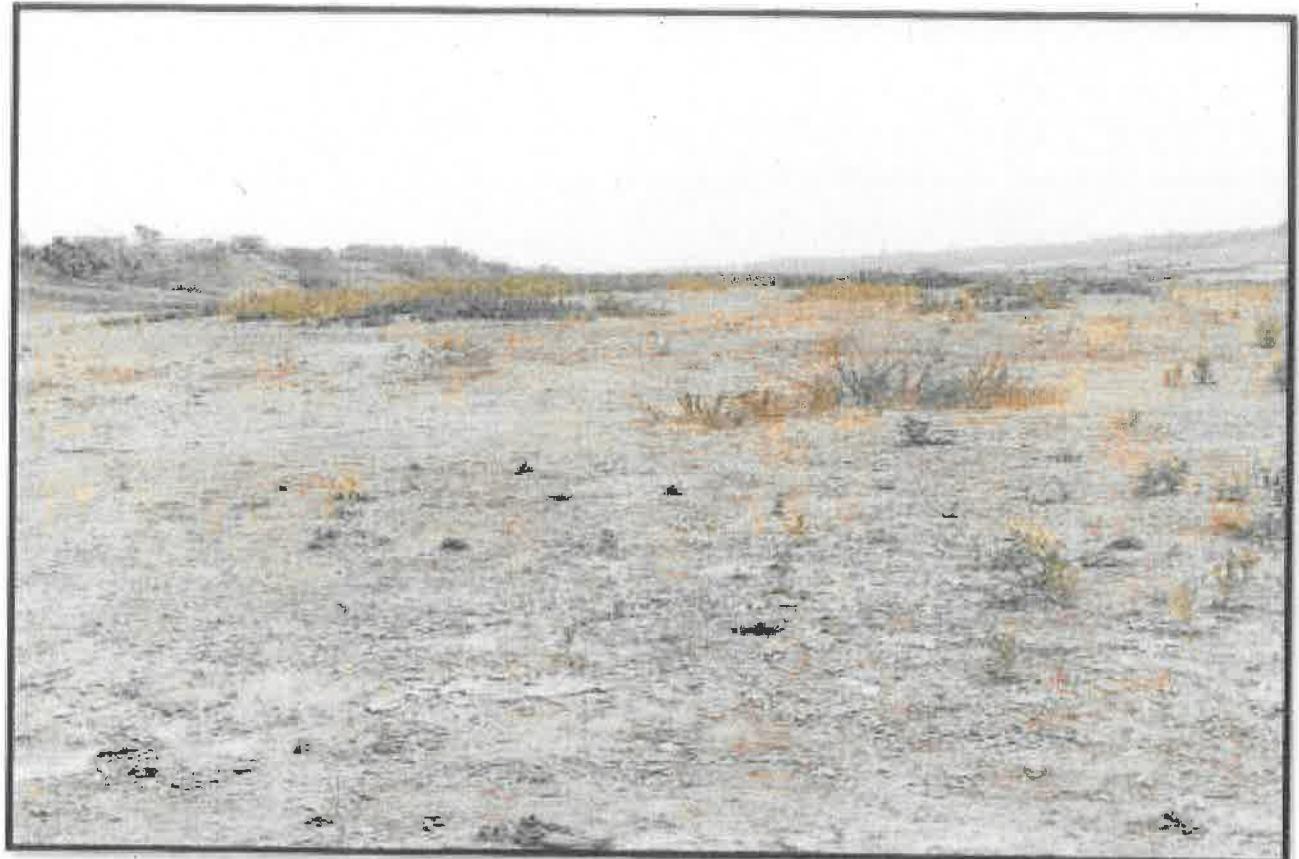
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



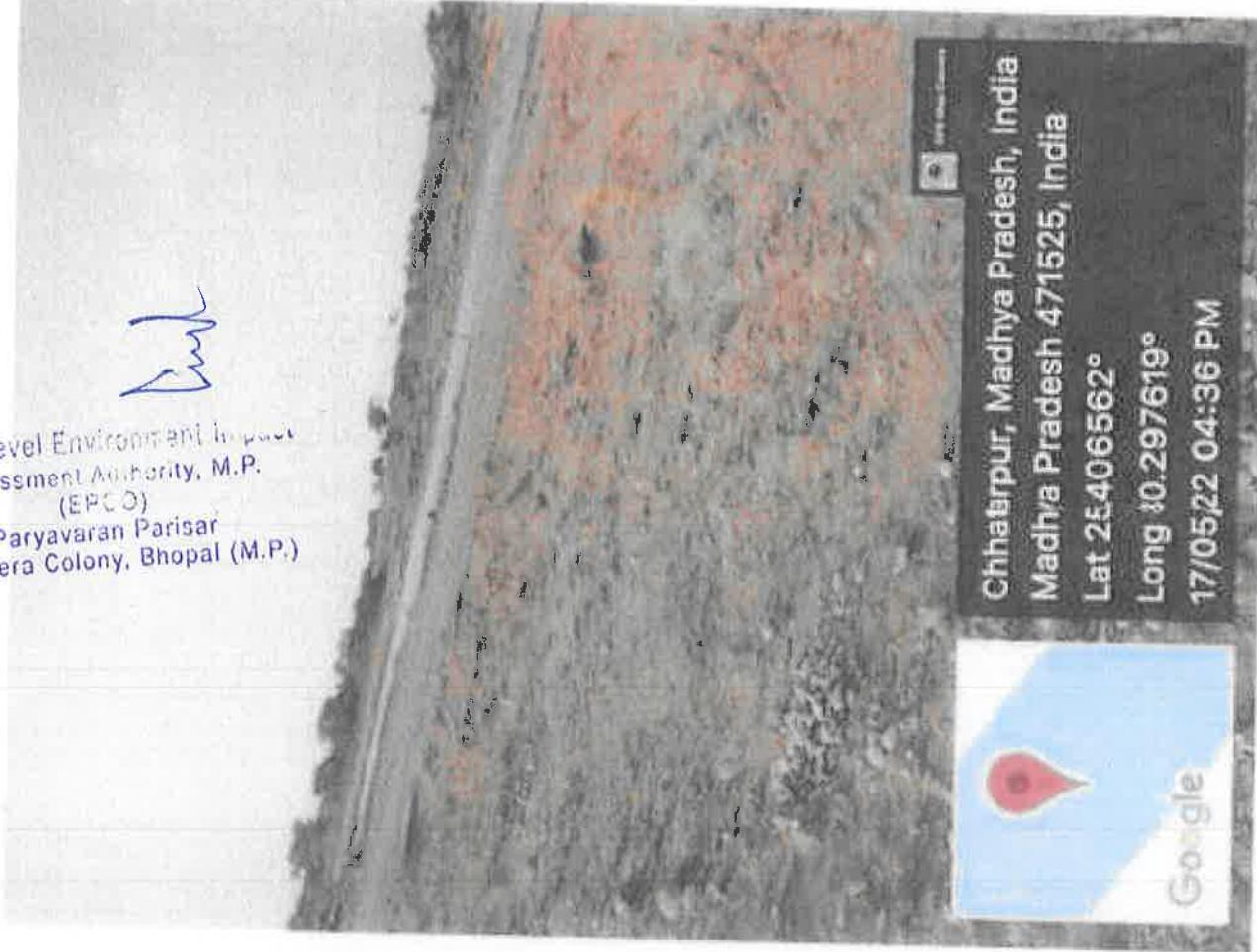
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(EPCO)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parishar  
E-5, Arera Colony, Bhopal (M.P.)



Chhattarpur, Madhya Pradesh, India  
Madhya Pradesh 471525, India  
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Long 80.319606°  
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Assessment Authority, M.P.  
(EPCO)  
Paryavaran Parivar  
F. 5, Arera Colony, Bhopal (M.P.)

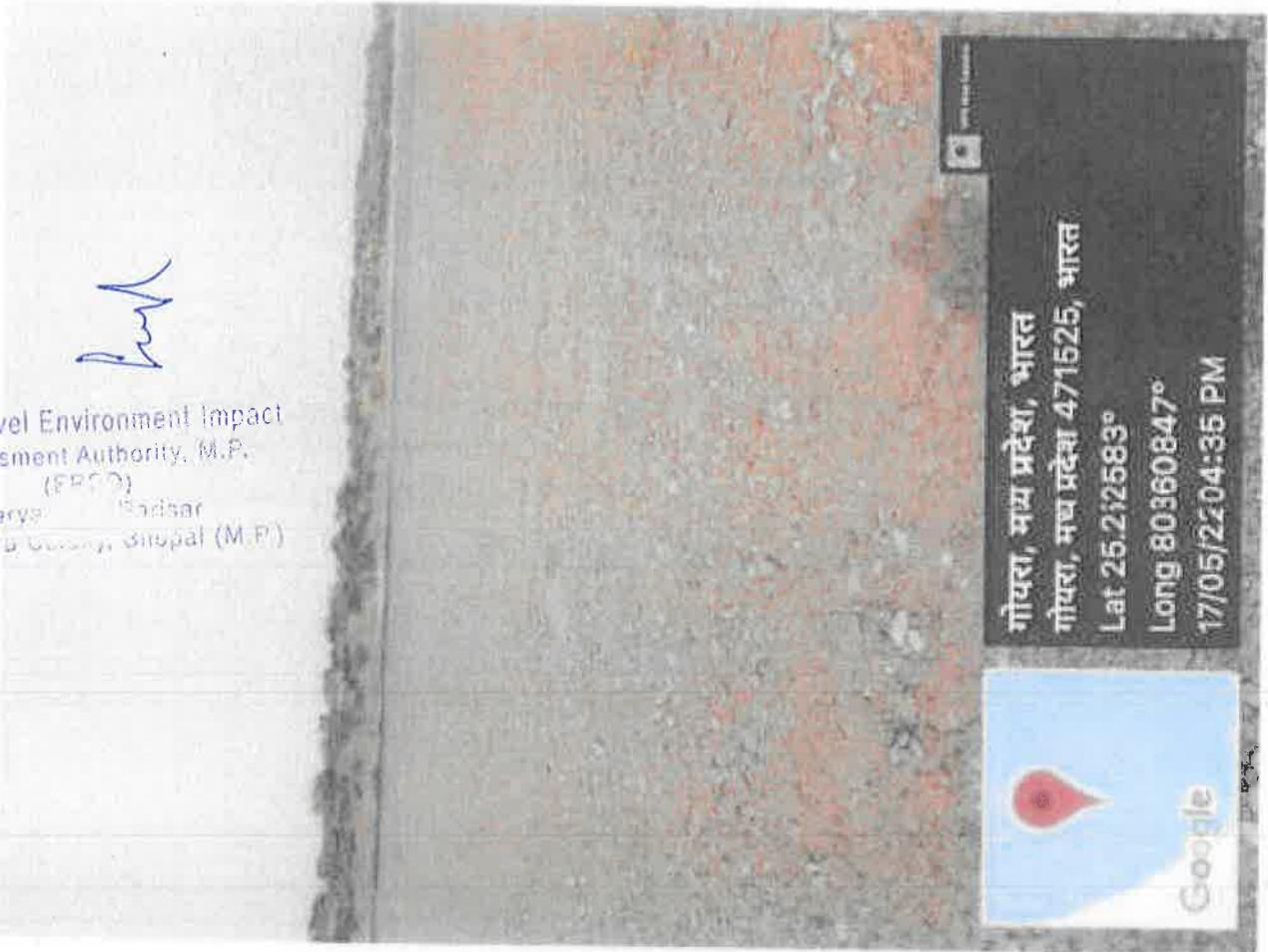
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State Level Environment Impact  
Assessment Authority, M.P.  
(ERIA)

Parva - Sadar  
E-5, Arera Colony, Anuppal (M.P.)



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Assessment Authority, M.P.  
(EPAO)  
Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)



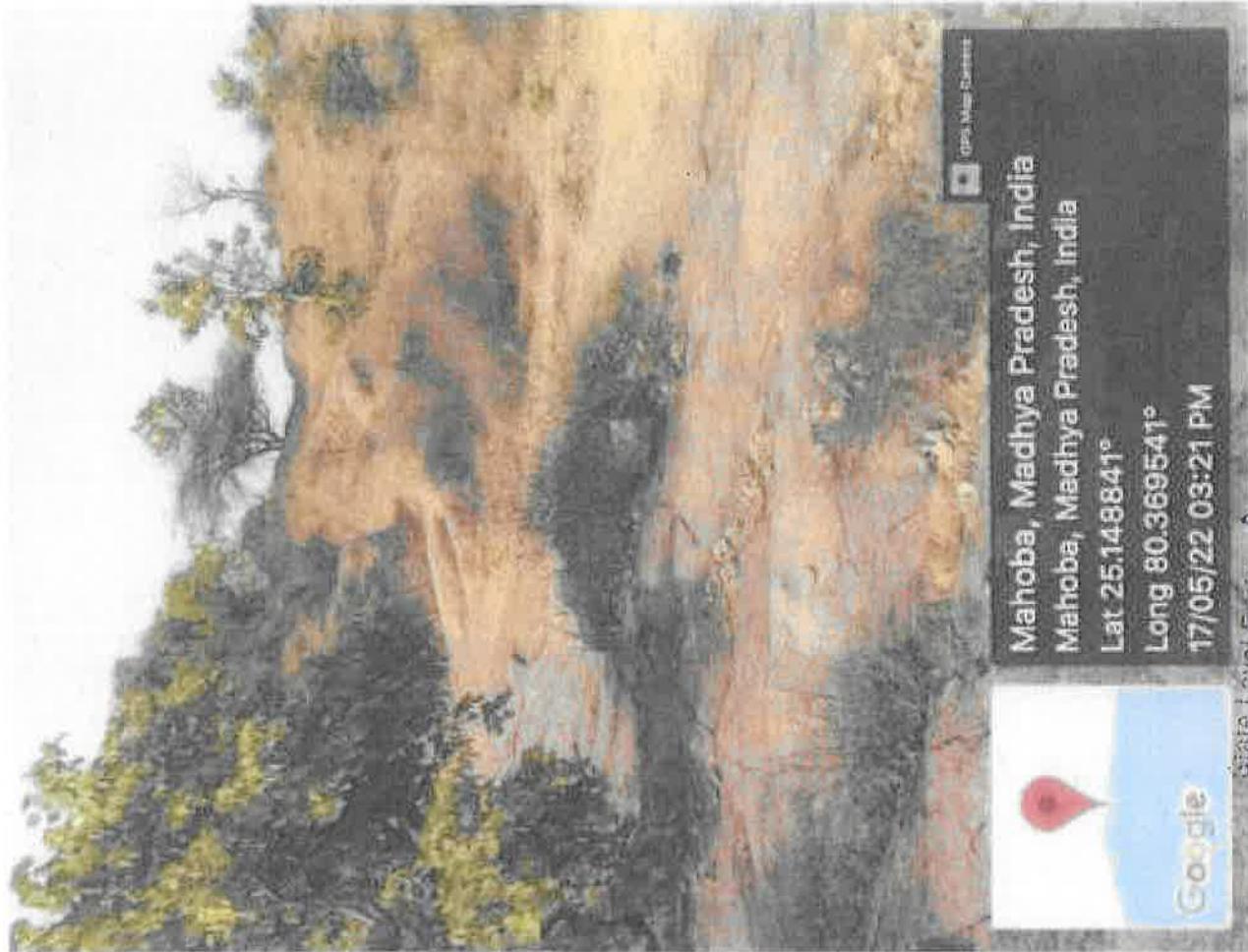
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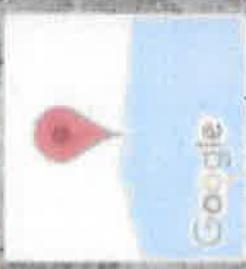
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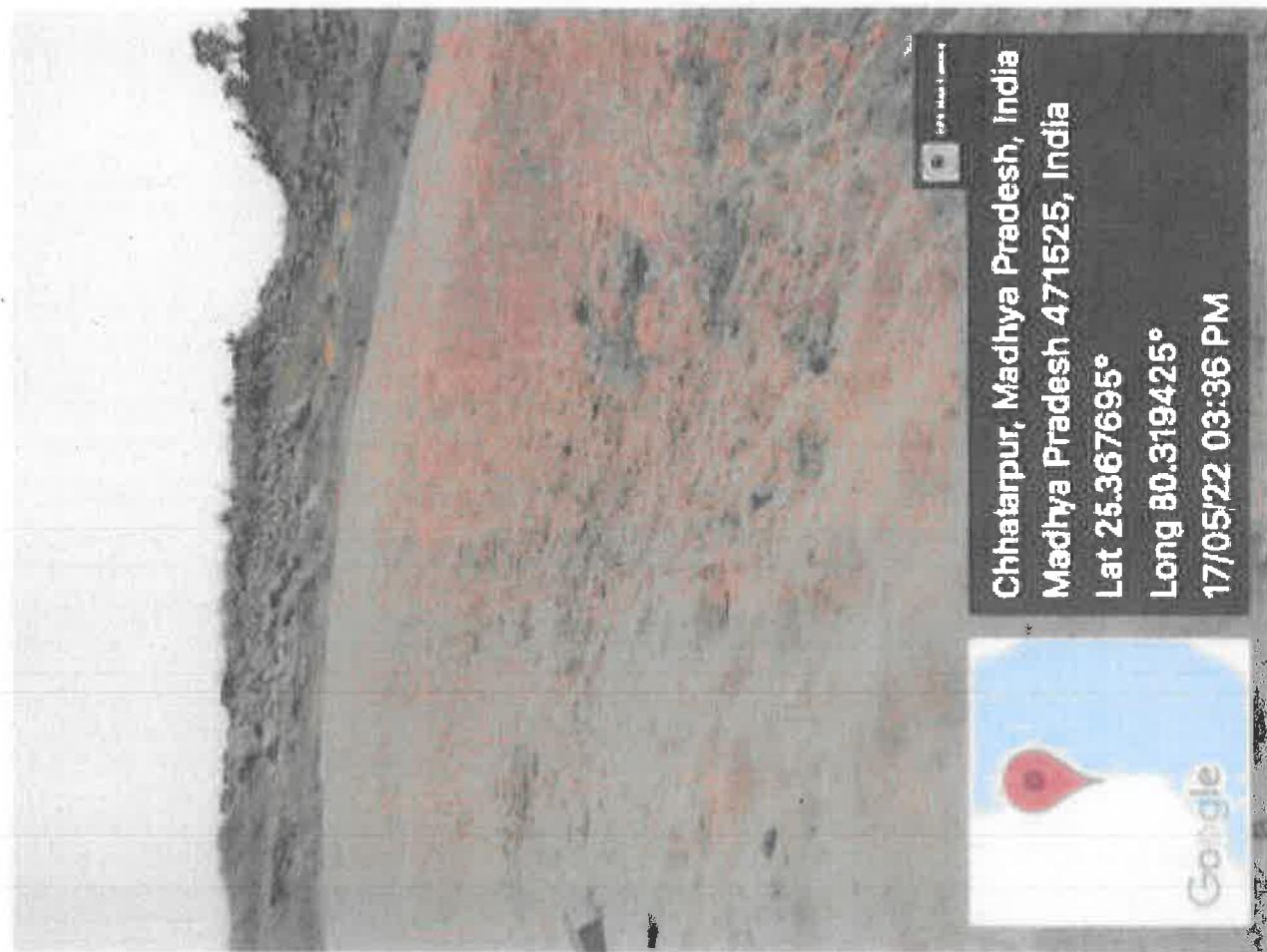
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State Level Environmental Impact  
Assessment Authority, M.P.  
(EPCA)

Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



Chhatarpur, Madhya Pradesh, India

Madhya Pradesh 471525, India

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**Chhatarpur, Madhya Pradesh, India**

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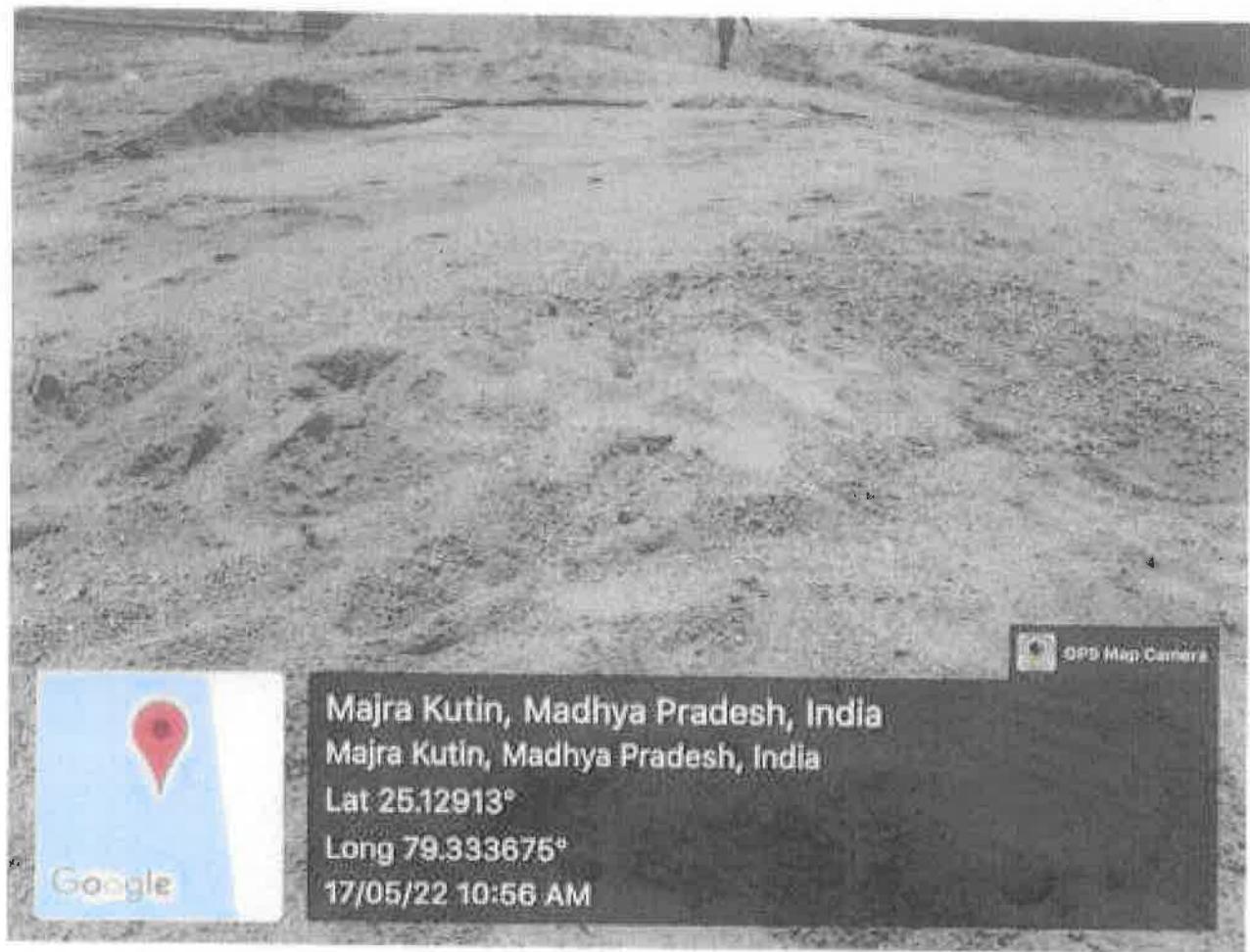
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State Level Environmental Survey  
Assessment Authority (SLEA)  
(EPCO)

Paryavaran Parishad  
E-5, Altera Colony, Bhopal (M.P.)



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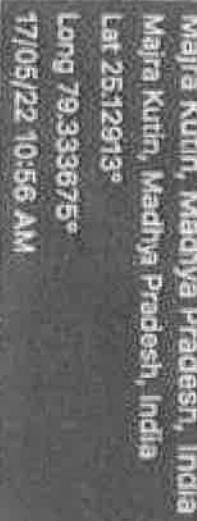
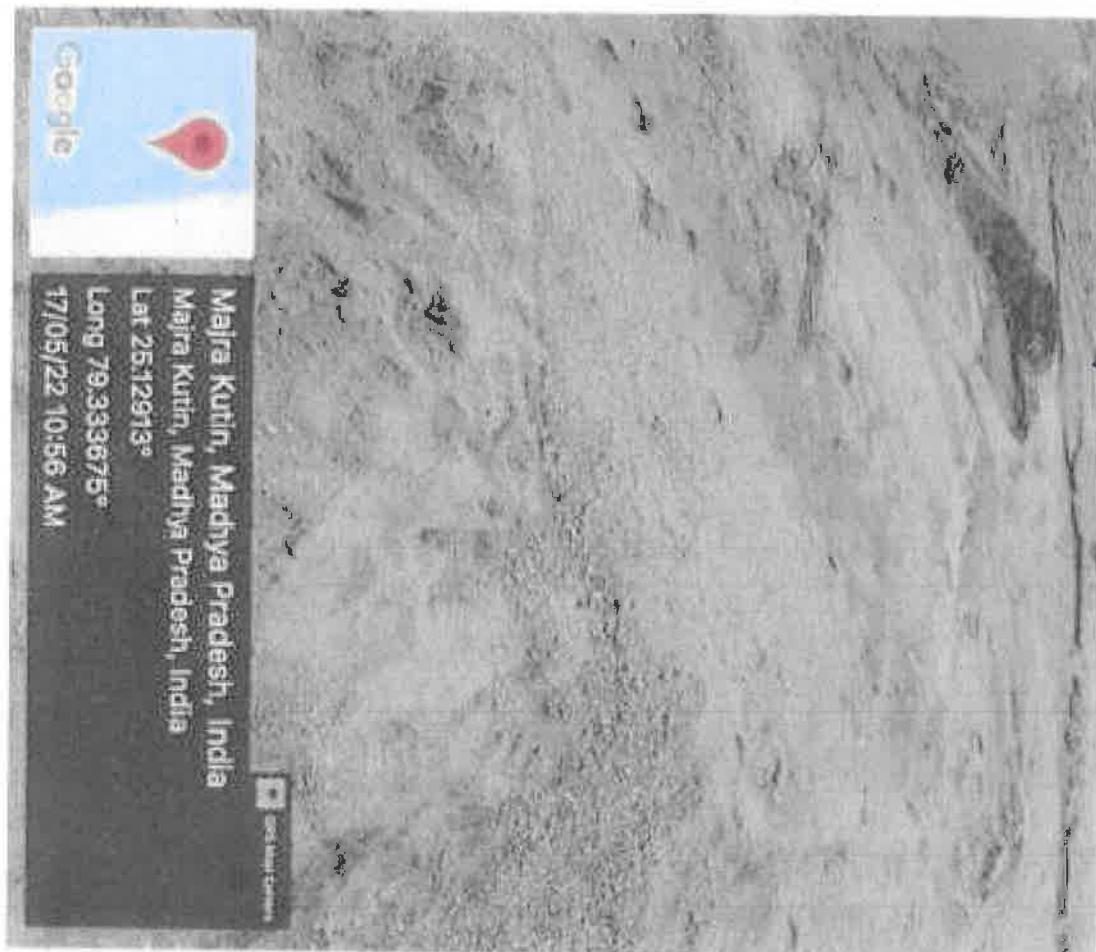
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029 Main Camera



Majra Kutin, Madhya Pradesh, India

Majra Kutin, Madhya Pradesh, India

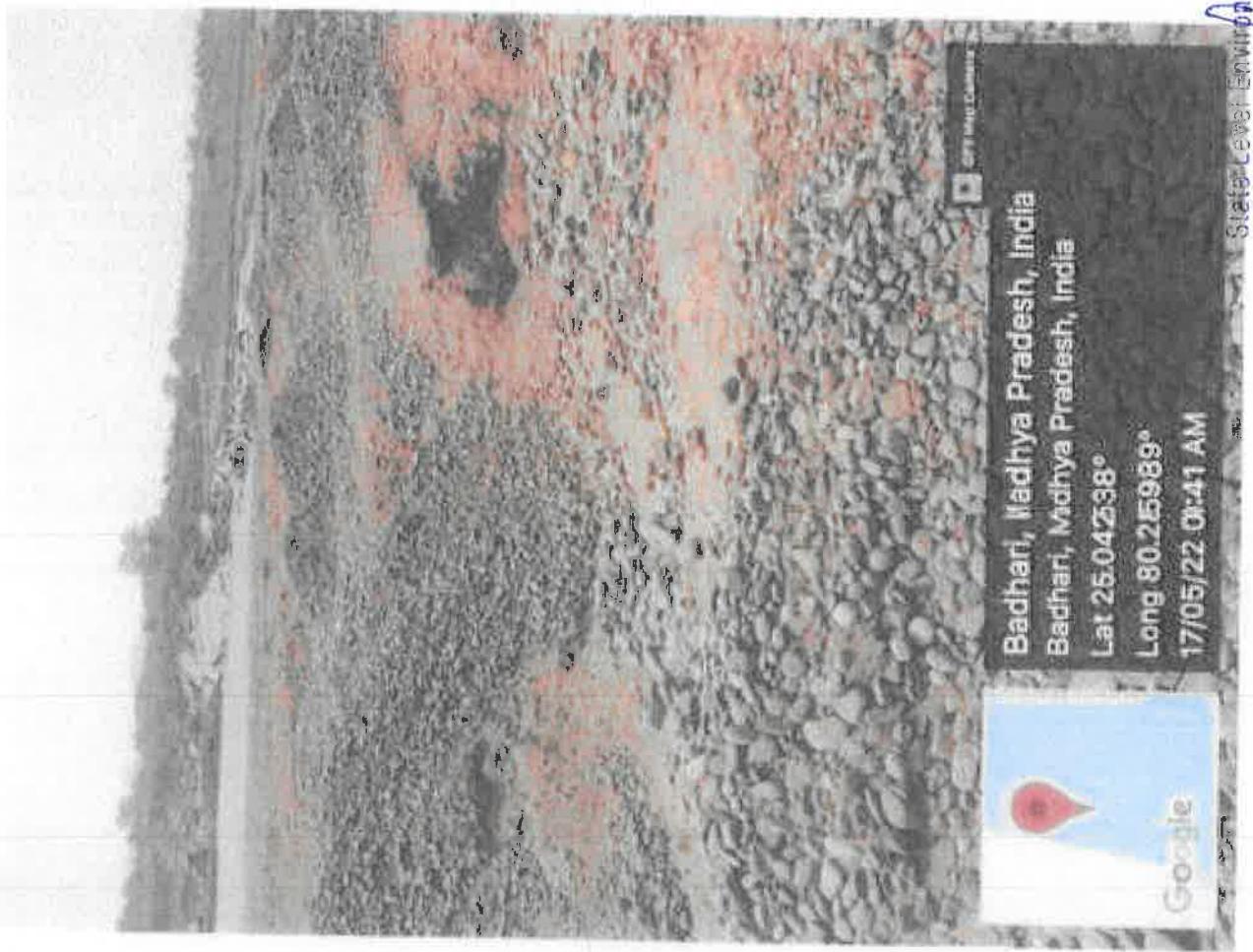
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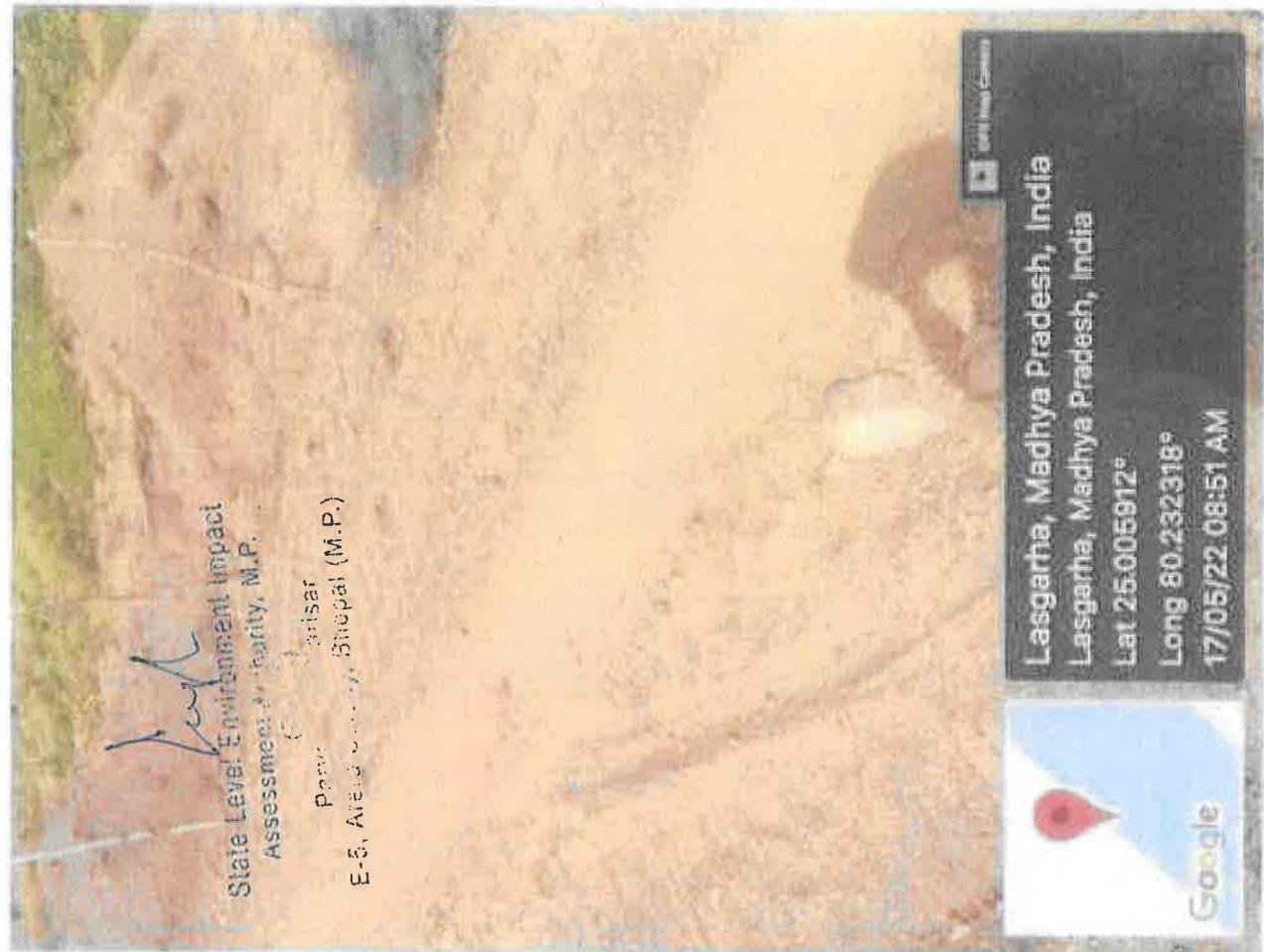
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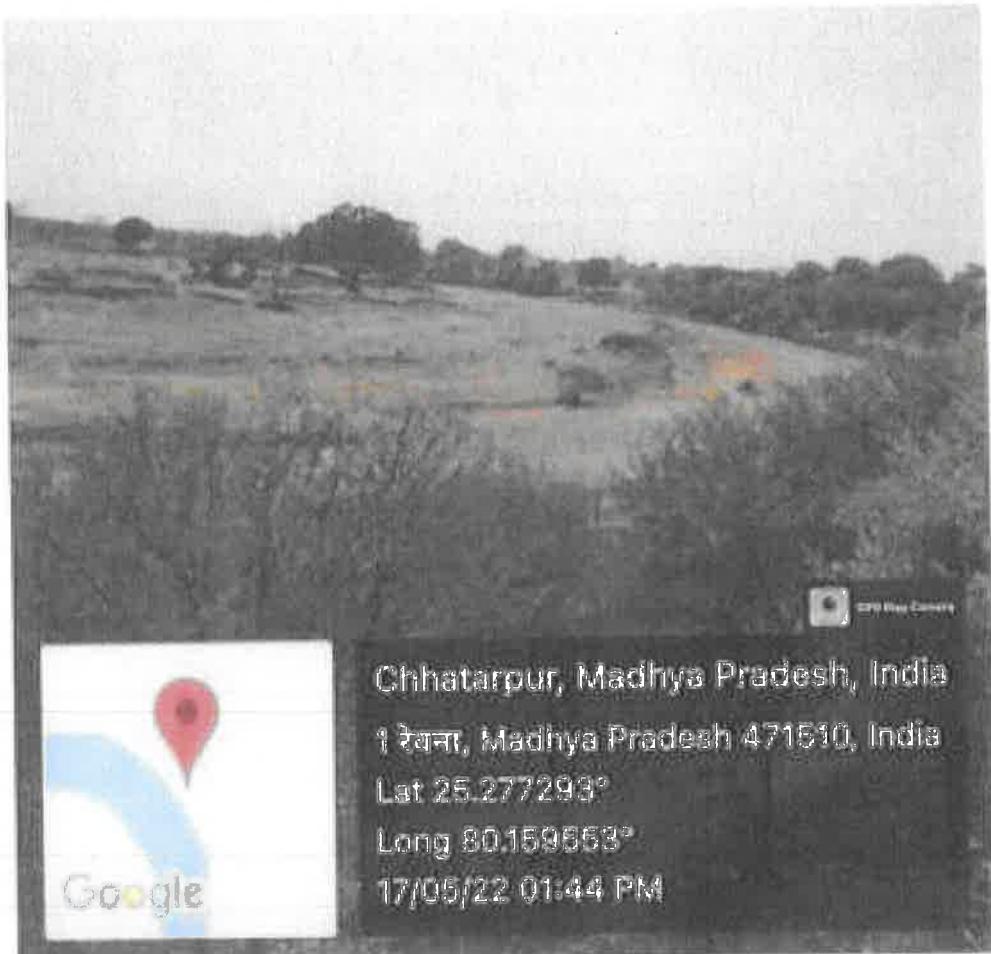
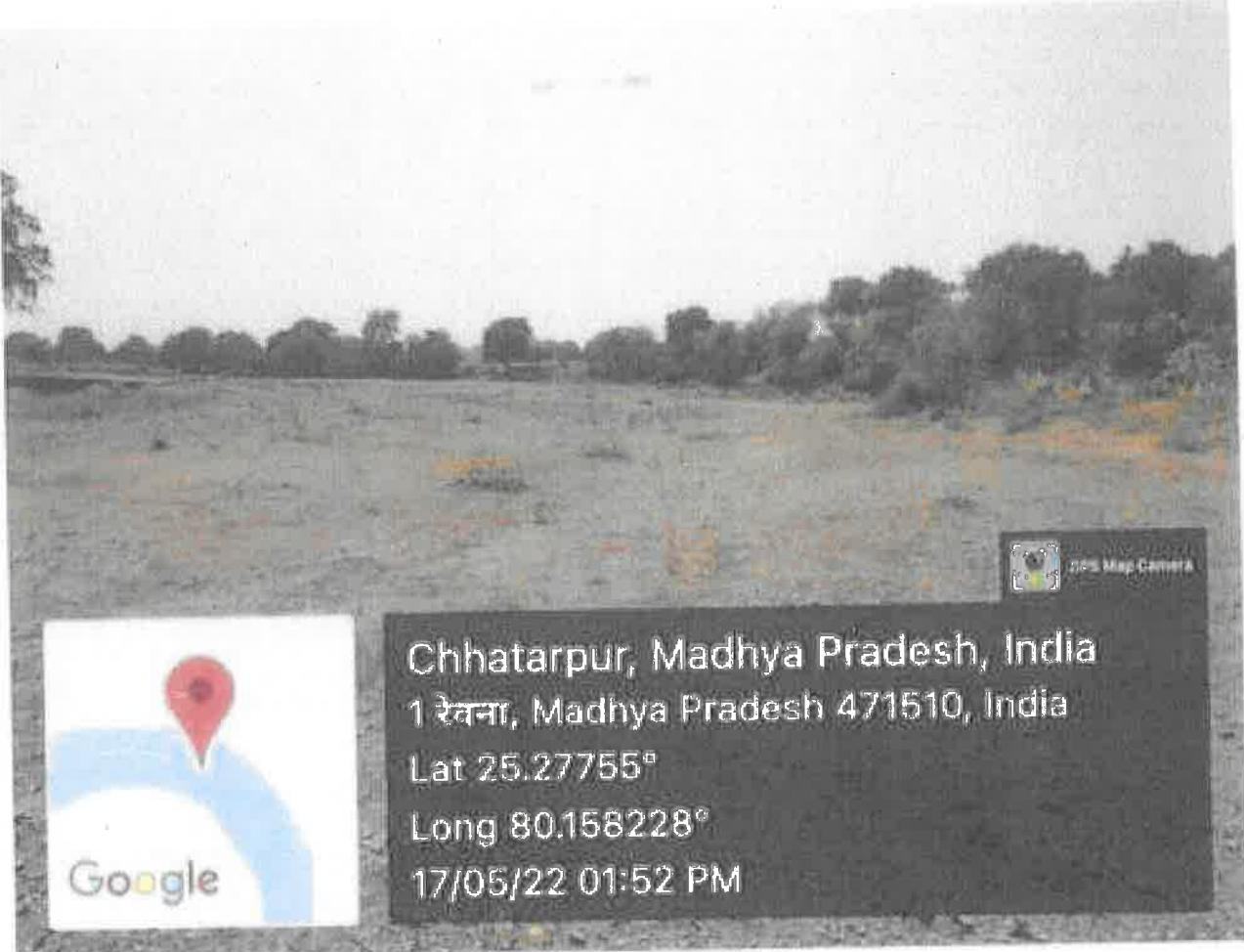
*Dinesh*  
Civil Level Engineer  
Assessment Authority, M.P.  
(EPG)

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Paravaran Pansar

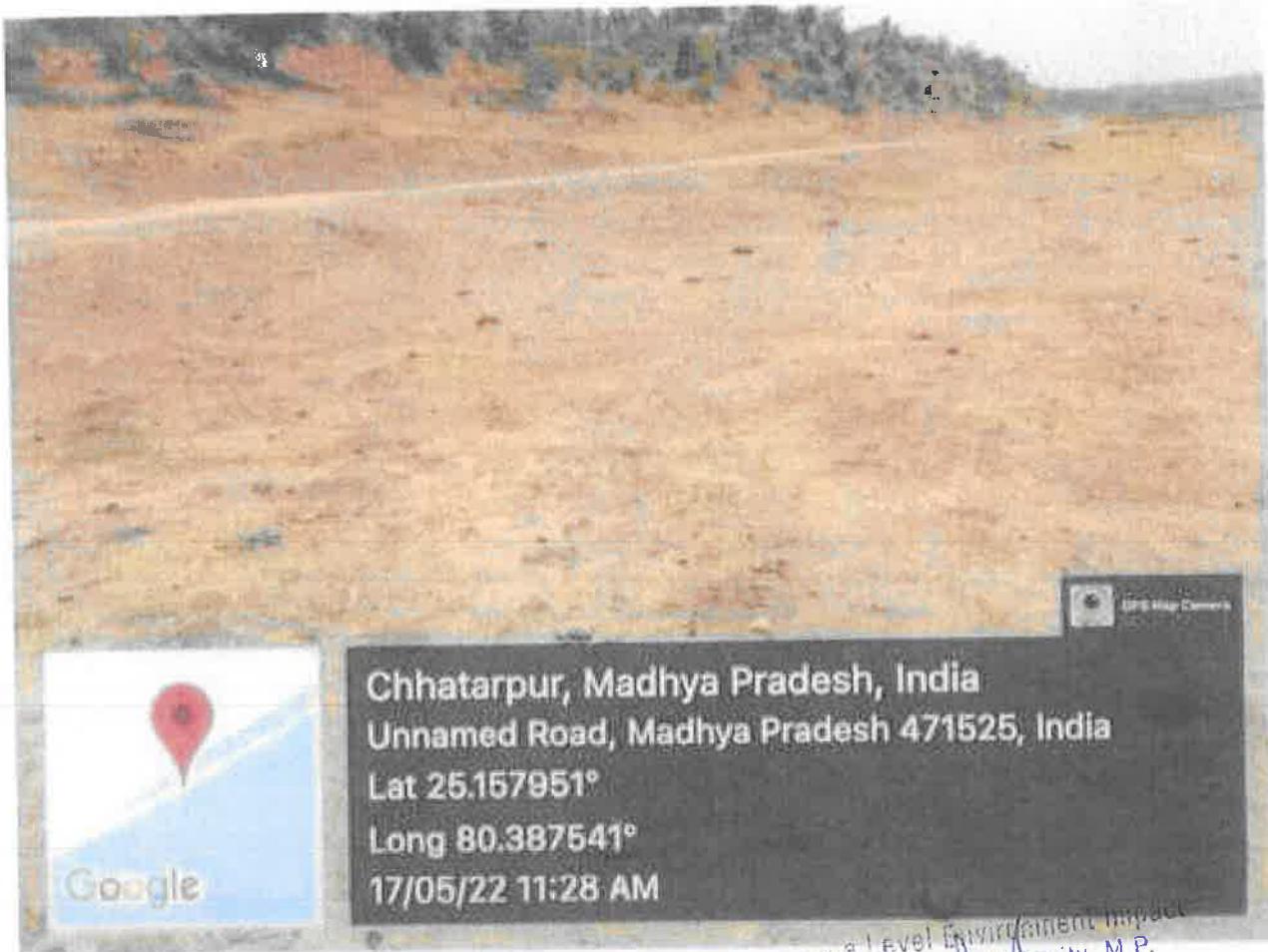
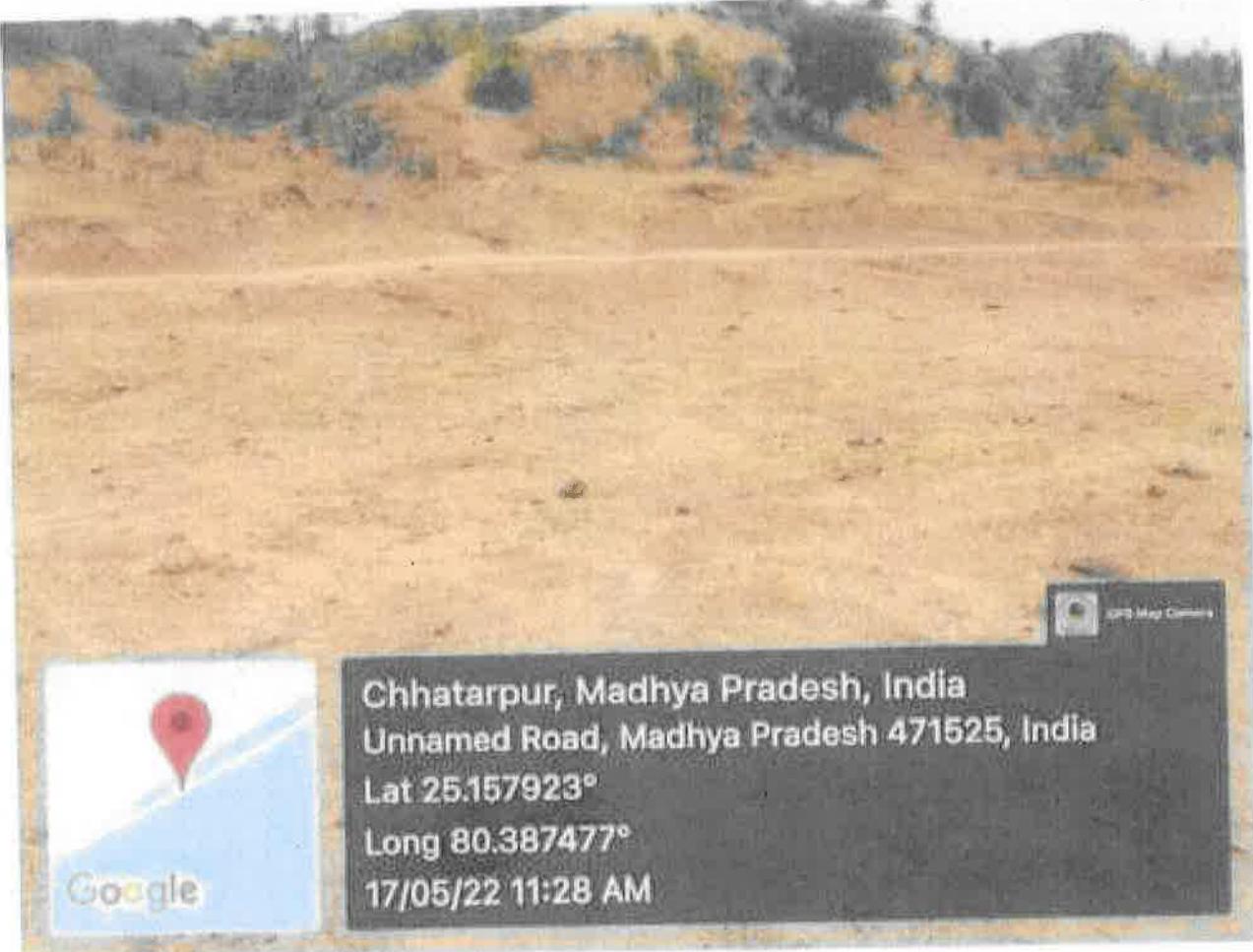


State Level Environmental Impact Assessment Authority, M.P.  
(EPCC)  
Parivar Parivar  
E-5, Arera Colony, Bhopal (M.P.)





State Level Environment Impact  
Assessment Authority (M.P.)  
(EPCA)  
Parivar Parisar  
E-5, Arera Colony, Bhopal (M.P.)



...a Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

**GOOGLE IMAGES OF**  
**SAND MINES IN**  
**CHHATARPUR**  
**DISTRICT**

*Arch*

GOOGLE MAP  
OF  
PLAZA SAND MINE  
AREA - 60 Ha. VILLAGE - IN A  
NON GAPS & DISTRICT - CHHATRAPUR (M.P.)  
LARGEST LITHORIA MINES AND MINERALS  
(NOT TO Scale)

Digitized by srujanika@gmail.com

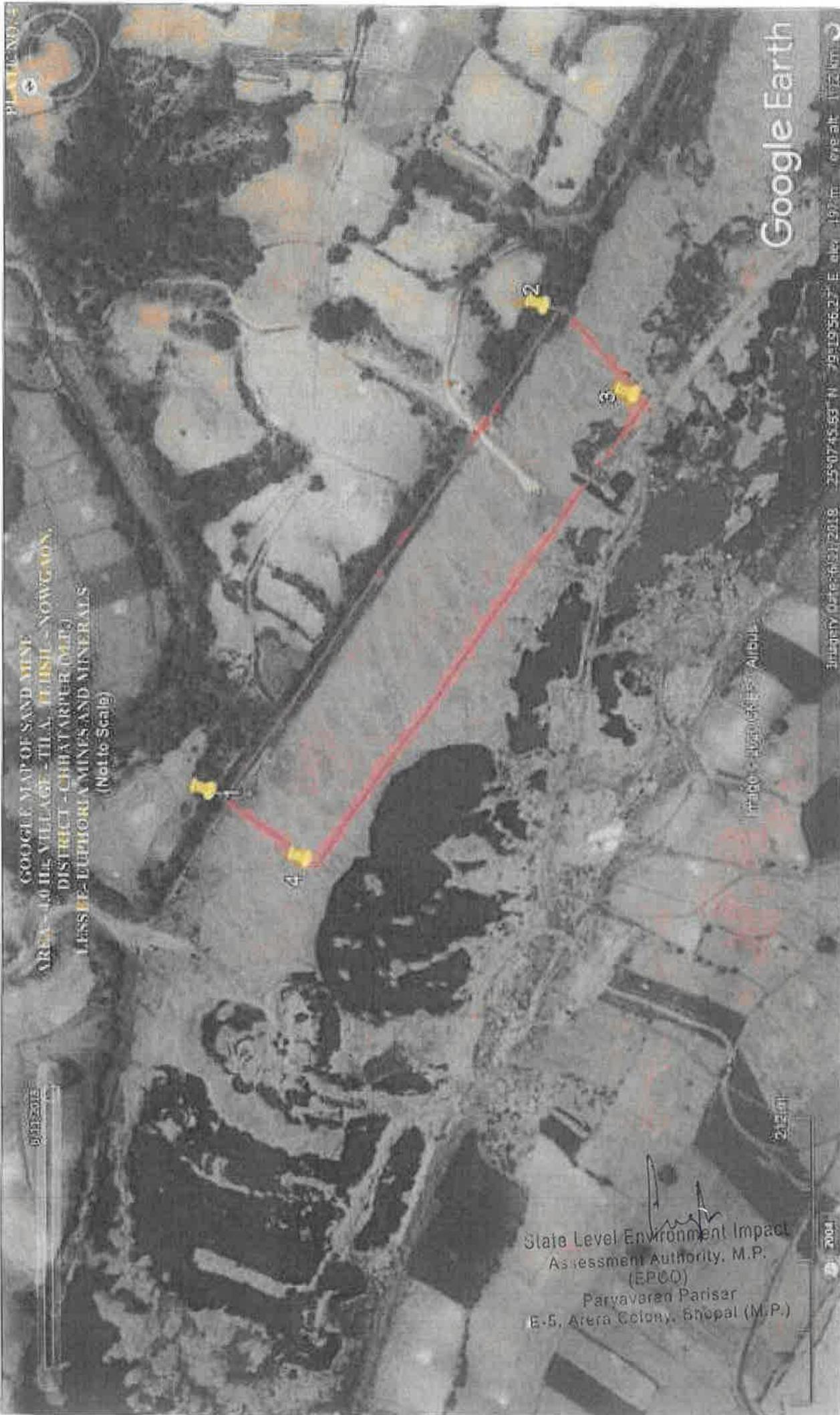
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Assessment Authority, M.P.  
(EPCA)  
Daryavaran Parishar  
E-5, Arera Colony, Bhopal (M.P.)

Google Earth



GOOGLE MAP OF SAND MINE  
ARE - COH VILLAGE - THA HUSHI - NEWGAON,  
DISTRICT - CHHATARPUR (MP)  
MINES & MINERALS  
(No Scale)

6/12/2018

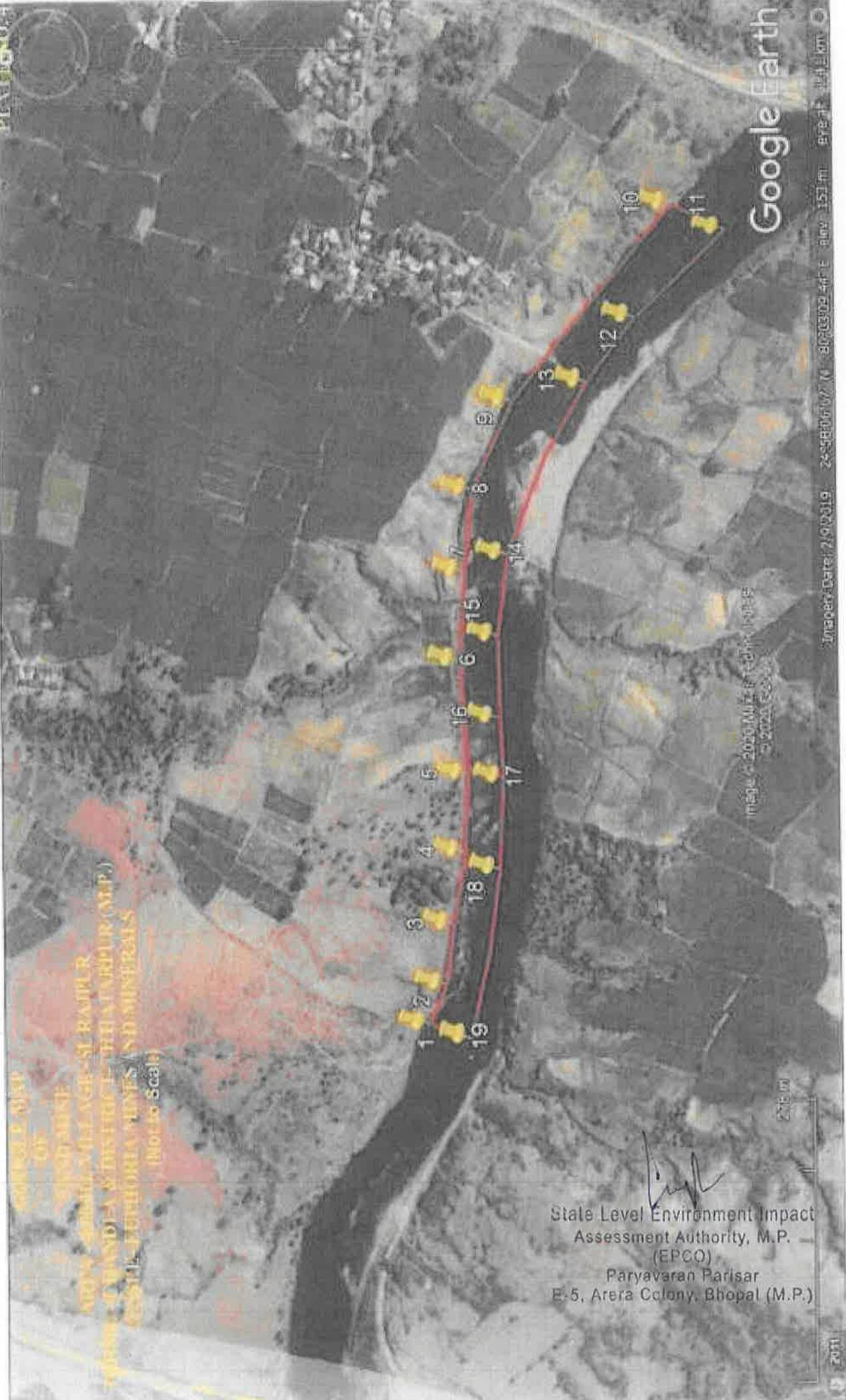


State Level Environment Impact  
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(EPAO)  
Parivaren Parivar  
E.S. Arera Colony, Bhopal (M.P.)

2004

Google Earth

Image Date: 26/06/06 22:58:06 WKT 26/06/06 22:58:06 E 40° 15' 33.00" N 23° 58' 06.00" S



GOOTIYAOP-SAND SHIRE  
VILLAGE - SURA, PESULI - RAJAGUR.  
DISTRICT - CHHATARPUR (MP)  
STATE - MACHHENDRA MINES AND MINERALS  
INDIA  
(1:50,000 Scale)

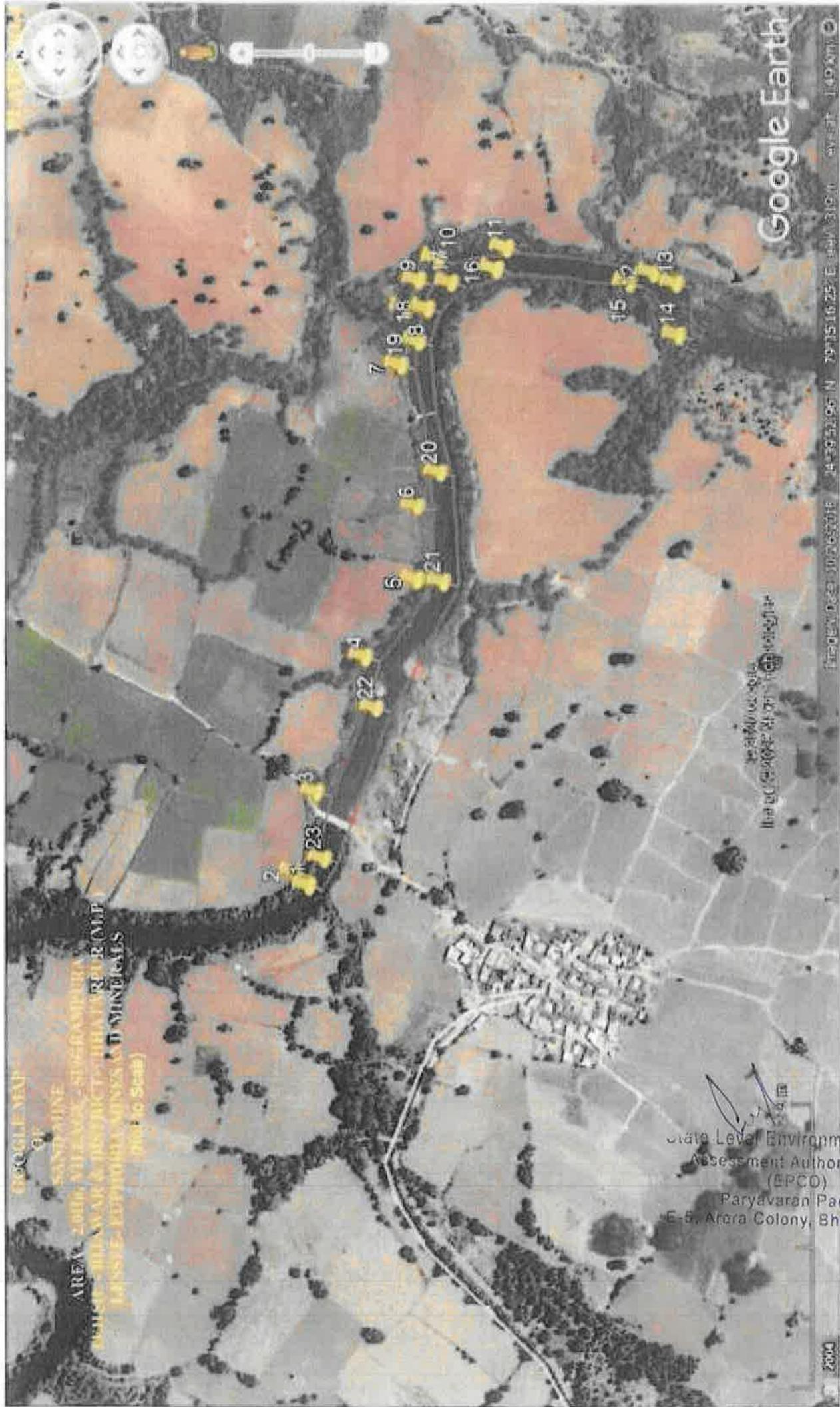


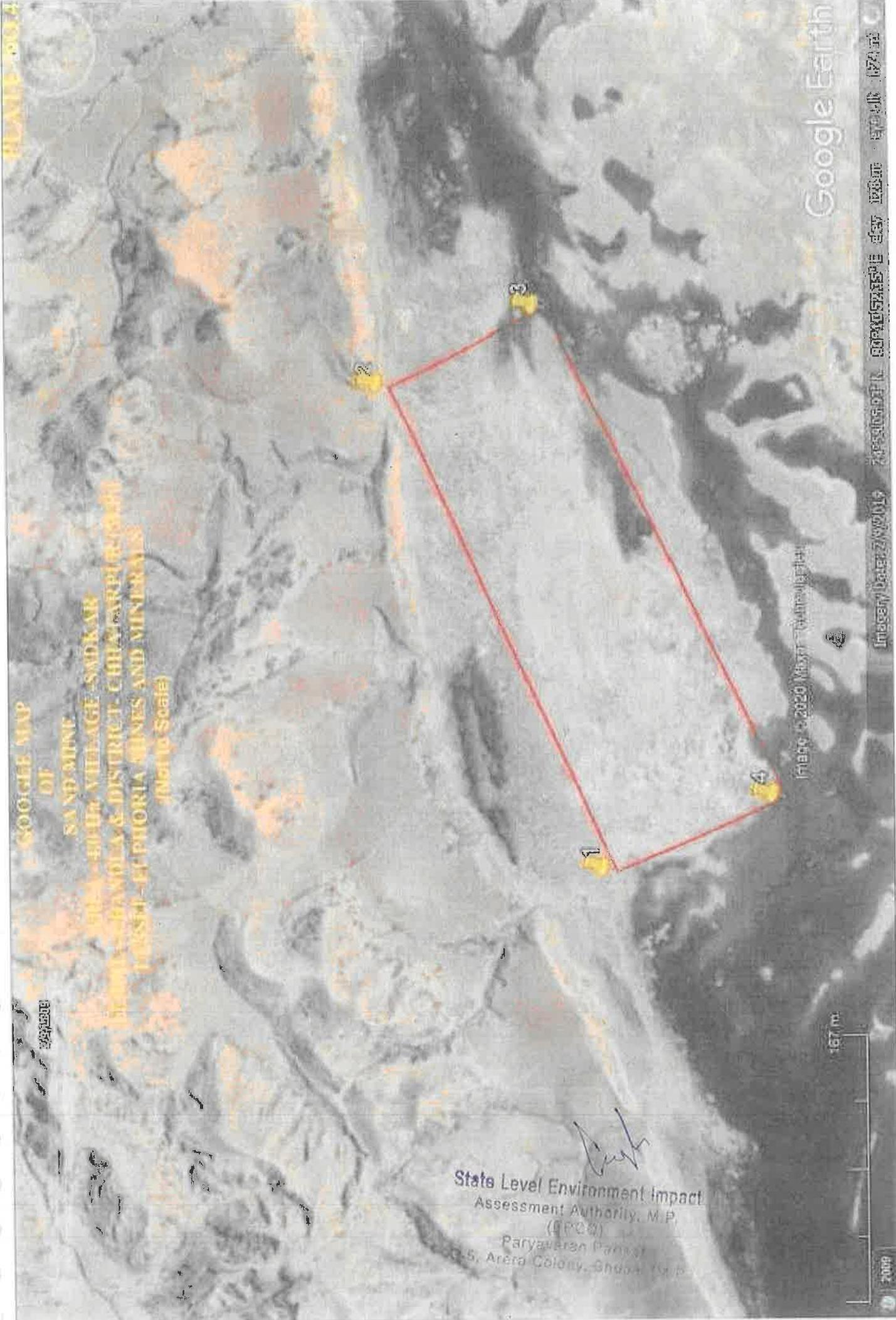
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(EPCA)  
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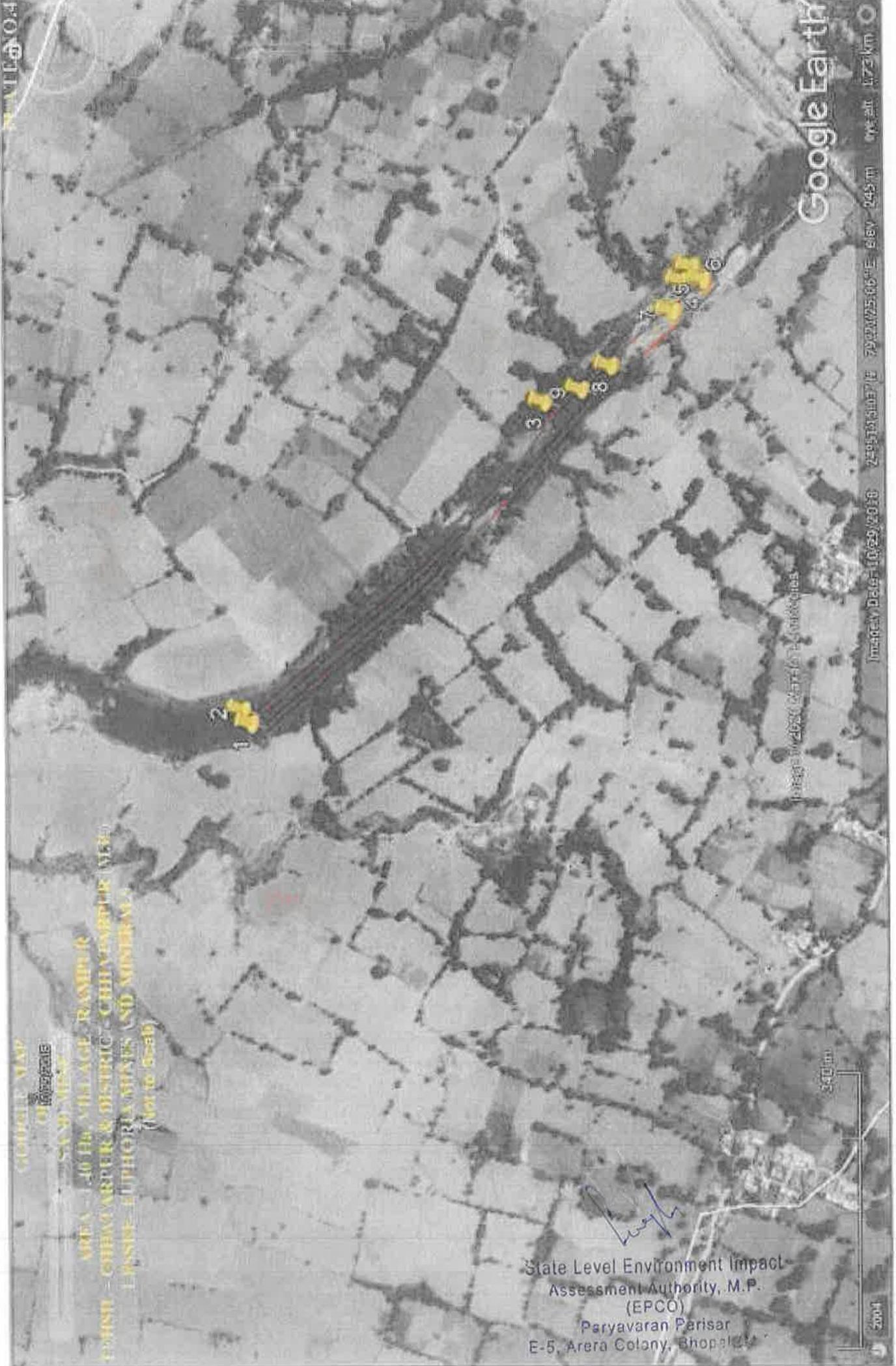
2020 Google  
2020 Max Technologies

25°05'23.11" N 79°57'20.59" E +27 195 m. 0m. 1524 m

Google Earth

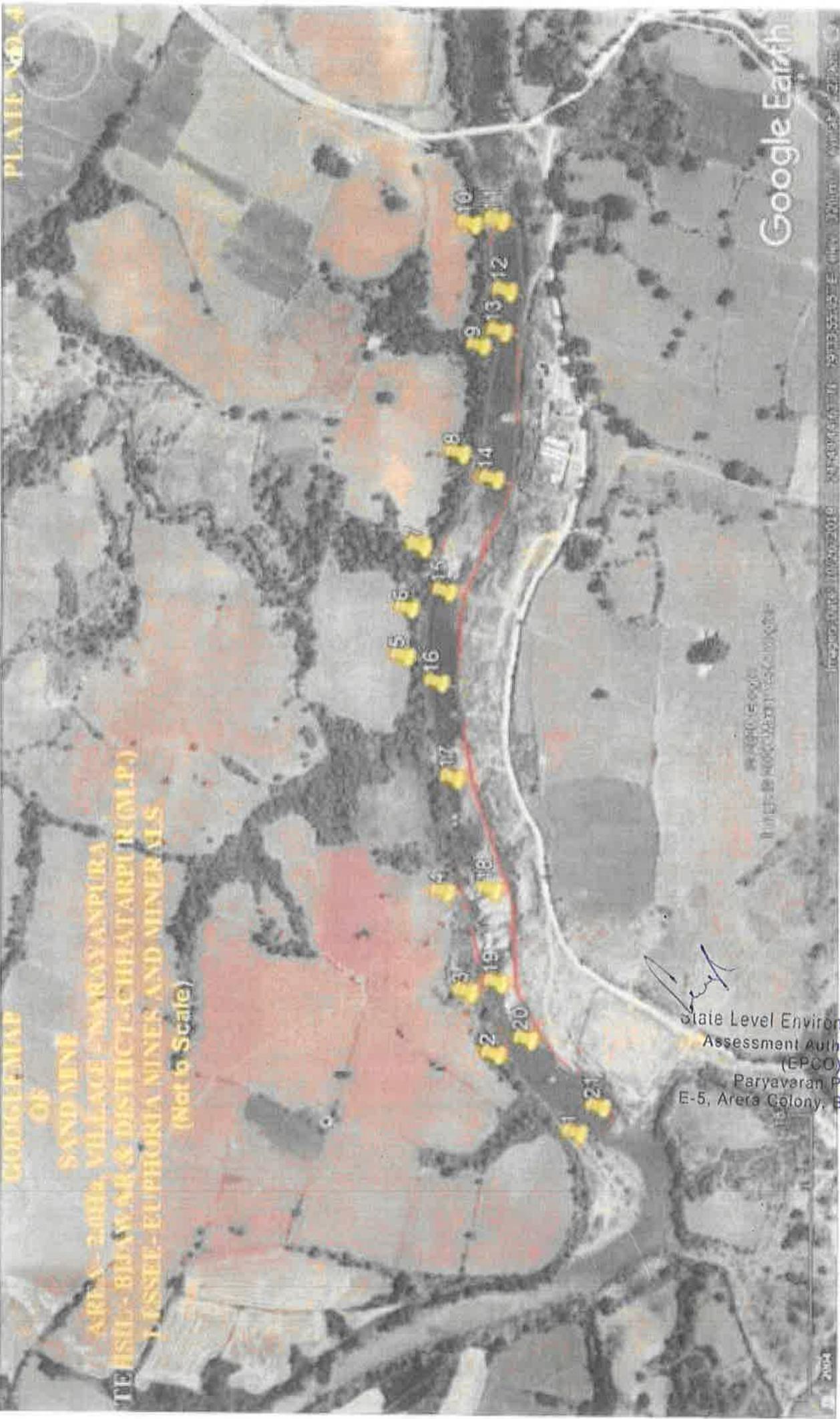




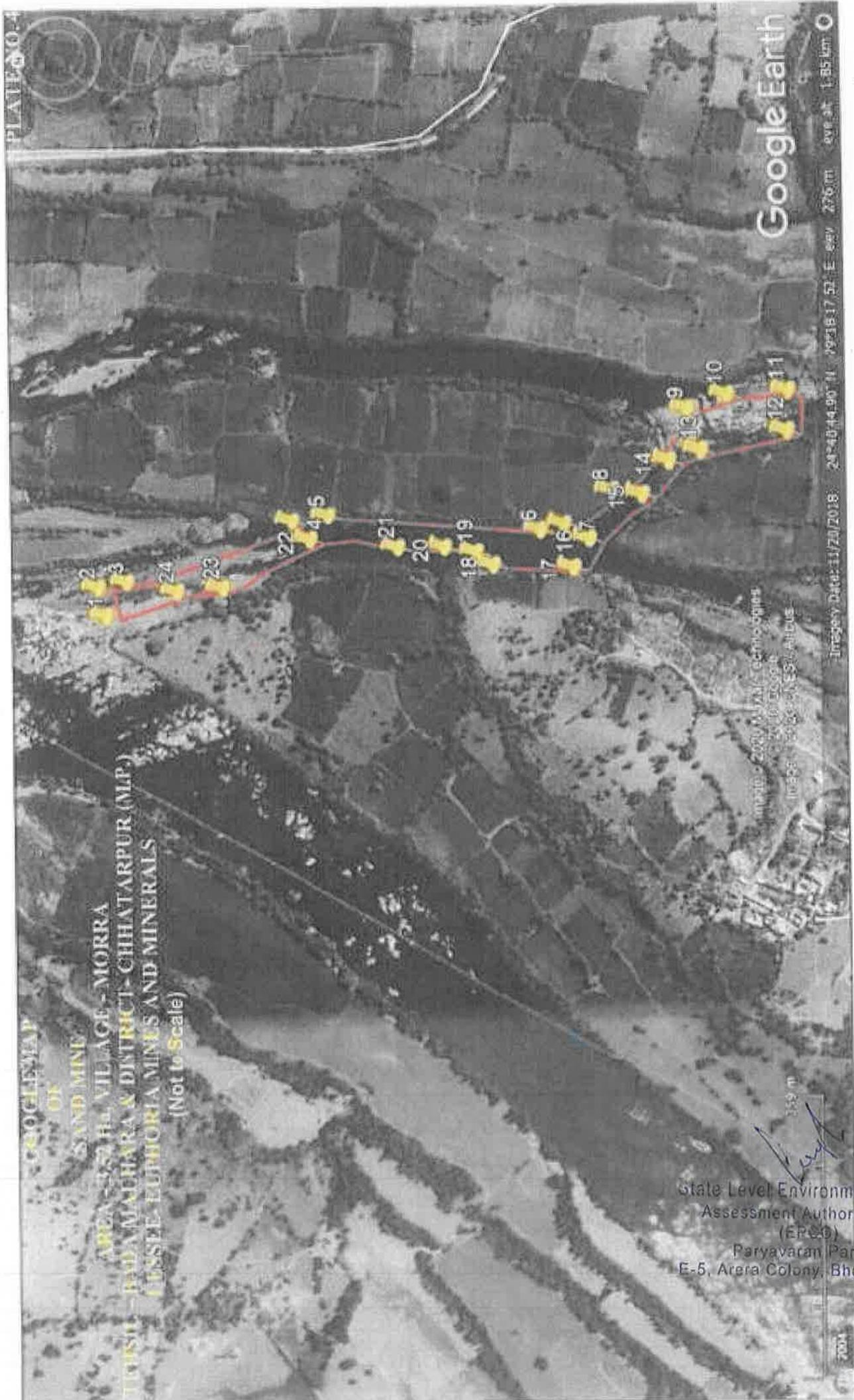


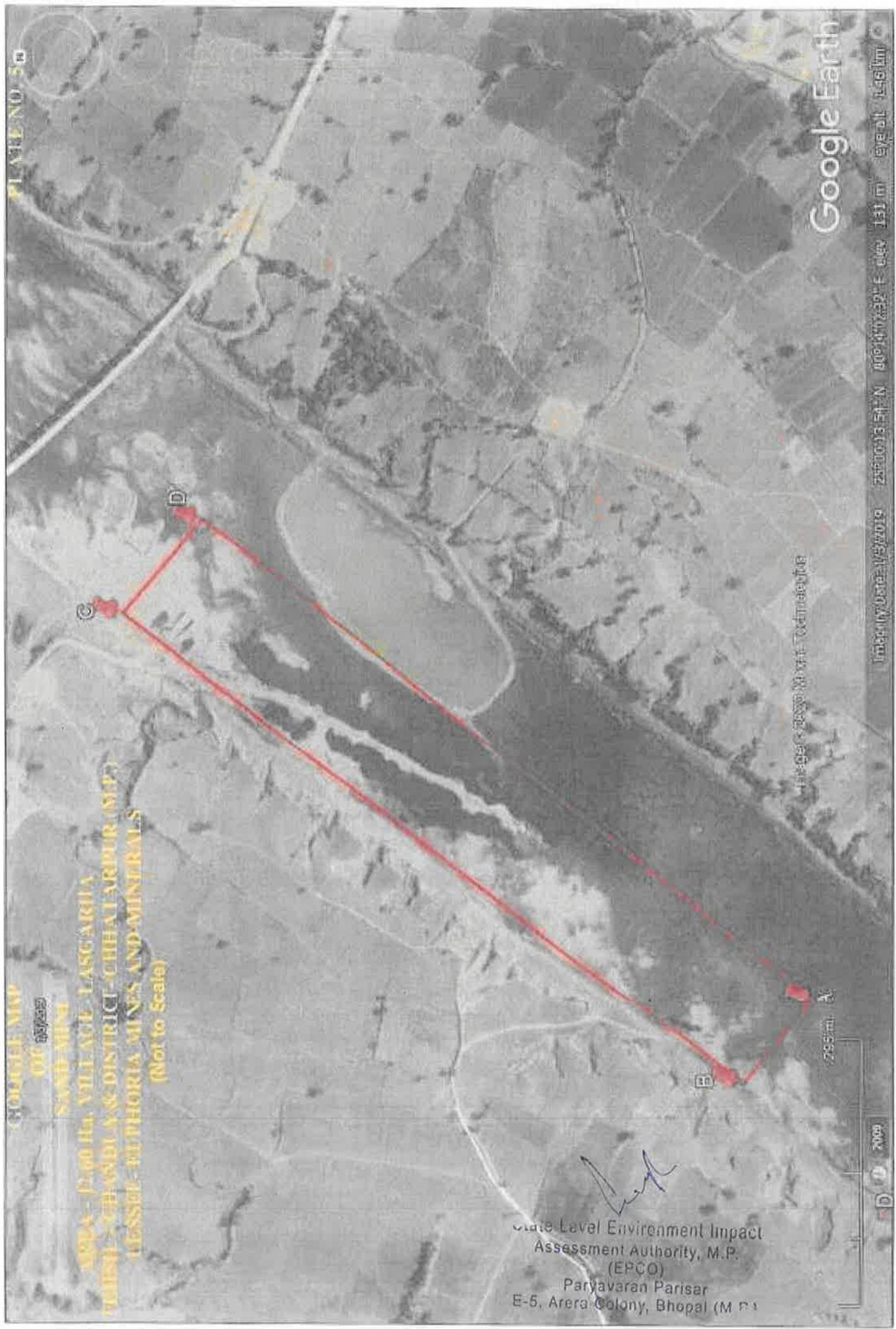
**BUDHIPURI  
SAND MINE**

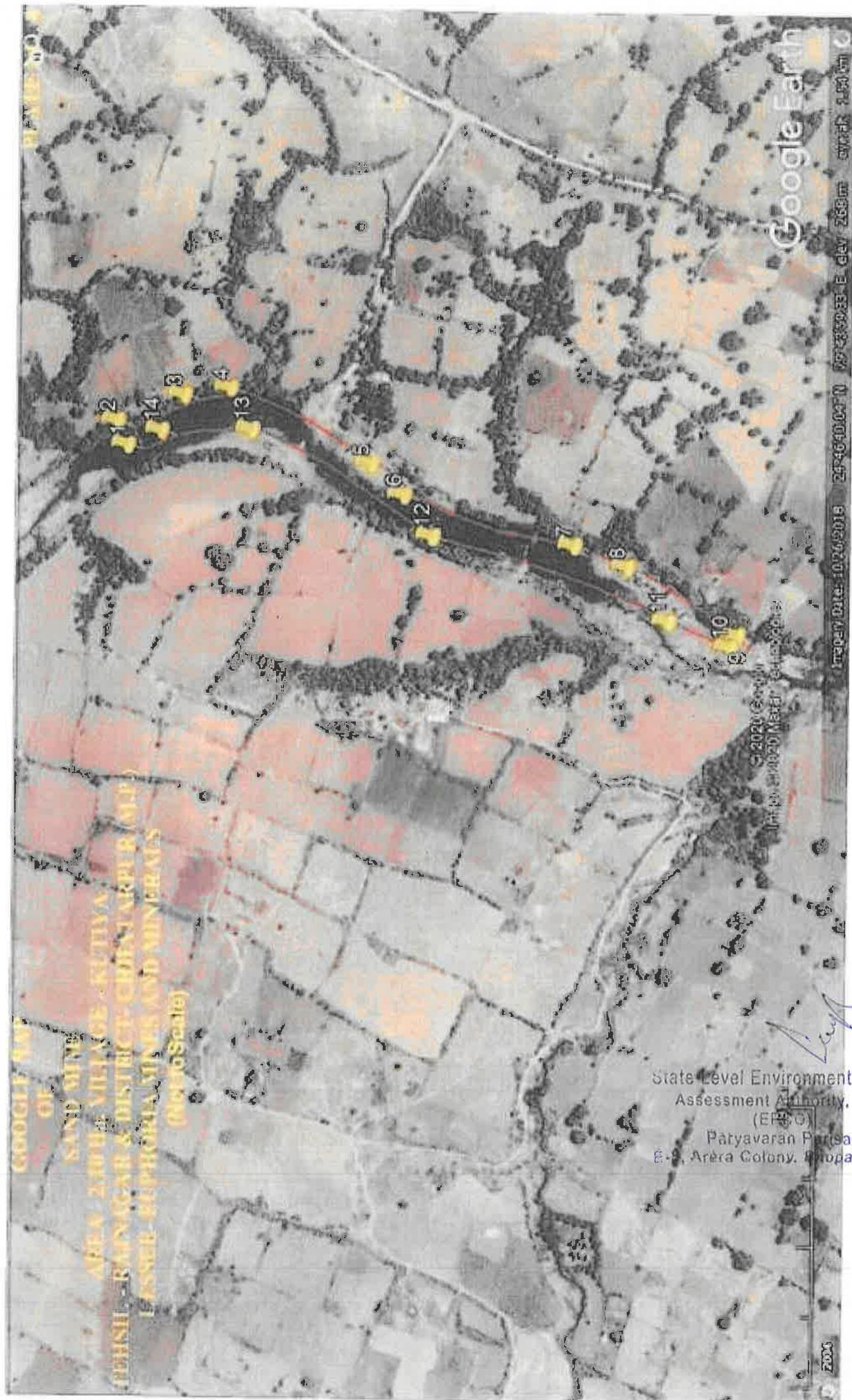
1000' - 2000' VILLAGES OF ASPIRA  
DISTRICT CHHATARPUR (M.P.)  
ASSOCIATION OF MINERS AND MINERALS  
(not to Scale)



*Cat*  
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)





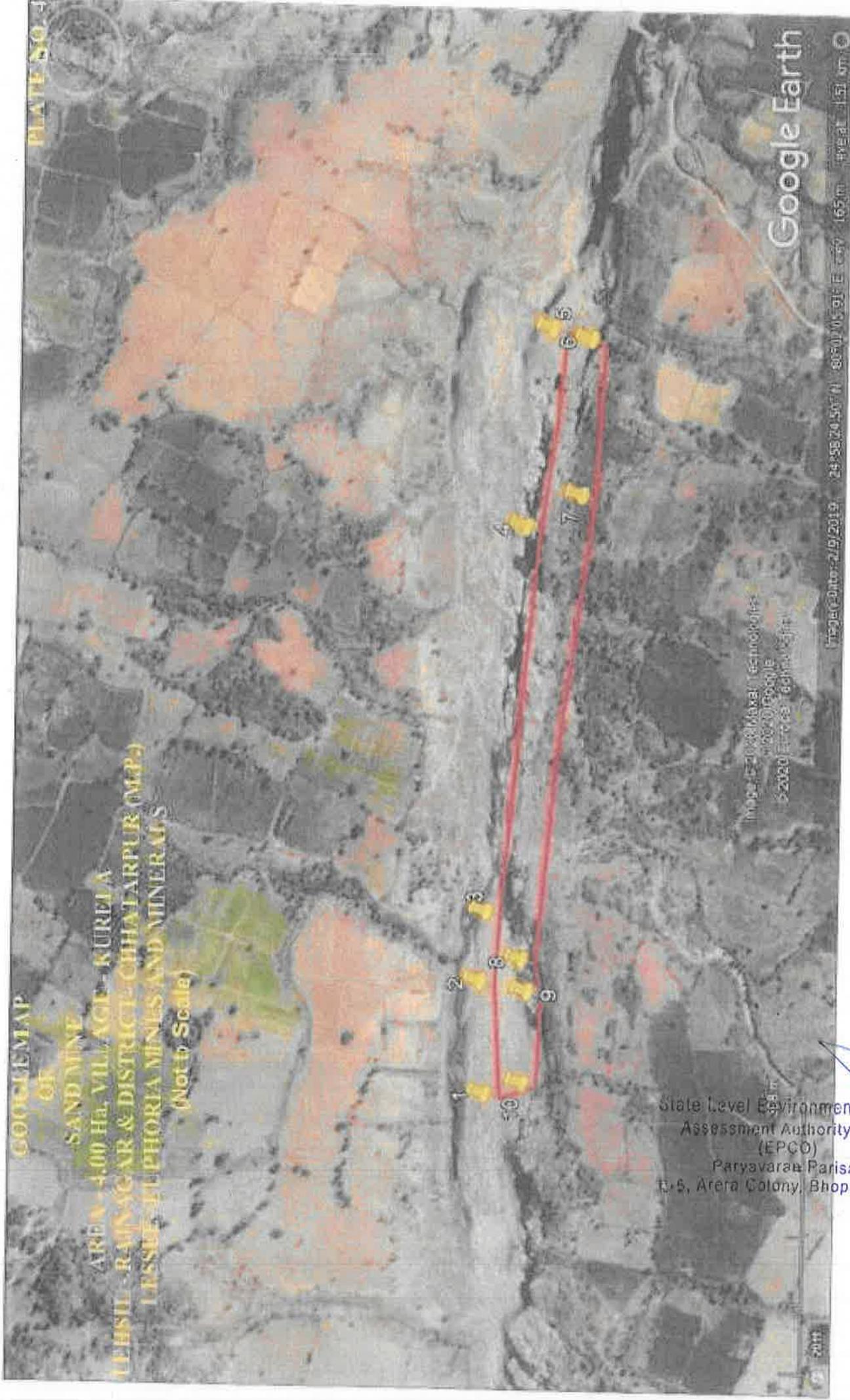


State Level Environment Impact  
Assessment Authority, M.P.  
(EPA)  
Patyavaran Parivar  
B-3, Arera Colony, Bhopal (M.P.)

**COASTAL MAP  
OR**

**SAND MINE  
AREA 4.00 Ha. VILLAGE - RUREA  
DISTRICT CHHATARPUR (M.P.)  
ISSUE TO PHORIA MINES AND MINERALS  
NOT TO SCALE**

PLATE NO.



*Copy*  
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
C-5, Arera Colony, Bhopal (M.P.)

2011

Google Earth

Image ©2018 Maxar Technologies  
All rights reserved  
2020 Google  
2019 Esri

Latitude: 24°56'24.50"N | Longitude: 070°00'59"E | Altitude: 165m | Scale: 1:51 km

PLATE NO. 1

GOOGLE MAP OF SAND MINE  
AREA - 7.00 Ha, VILLAGE - KARHAGANDI, TEHSIL - NOWGAON,  
DISTRICT - CHHATARPUR (MP)  
LESSEE - EUPHORIA MINES AND MINERALS

(Not to Scale)

[Red]

A

B

C

D

H

G

E

F

Draught River

325 m

Google Earth

Image © 2021 Maxar Technologies

Imagery Date: 07/31/2021 25°10'32.27"N 79°17'09.27"E elev. 198 m eye-alt 1.50 Km

Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, C

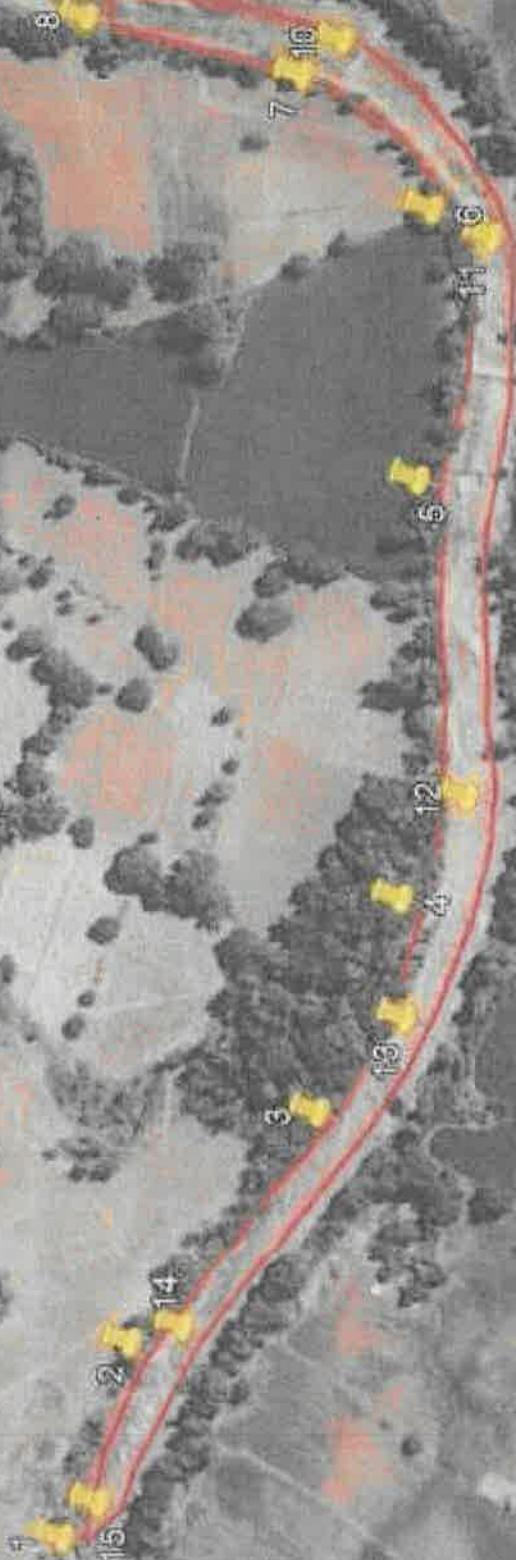
Google Earth

Image © 2020 Maxar Technologies

Imagery Date: 1/11/2018 24°45'05.96" N 75°40'32.12" E elev: 261 m eye alt: 1.07 km

STATE MINE MAP ON SAND MINE  
AREA - 140 Ha  
VILLAGE - KODAARI TILSI - CHHATPUR  
DISTRICT - CHHATPUR (A.P.)  
LESSOR - EUCHARAVINS AND MINERALS  
(Not to Scale)

PLATE NO. 1



State Level Environment Impact  
Assessment Authority, M.P.  
(EPAO)  
Paryavaran Paasra  
E.S., Arera Colony, Bhopal (M.P.)

2004

Google Earth

Image Date: 13/3/2019      25/01/2027      803500 E + Noy - 125m - 150m

Image: 2020 Maxar Tech

Scale  
0 1000 2000

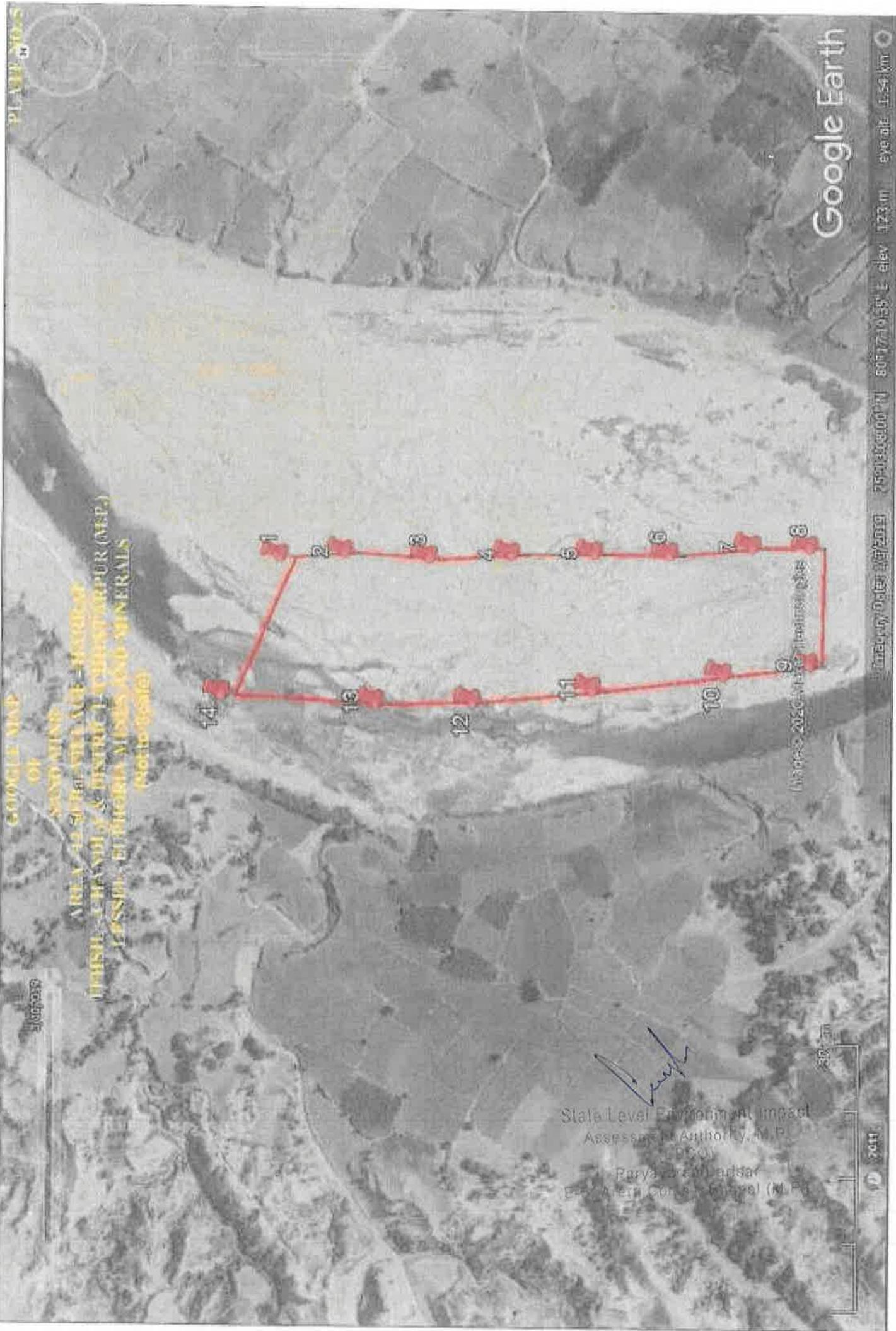
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCO)  
Baryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

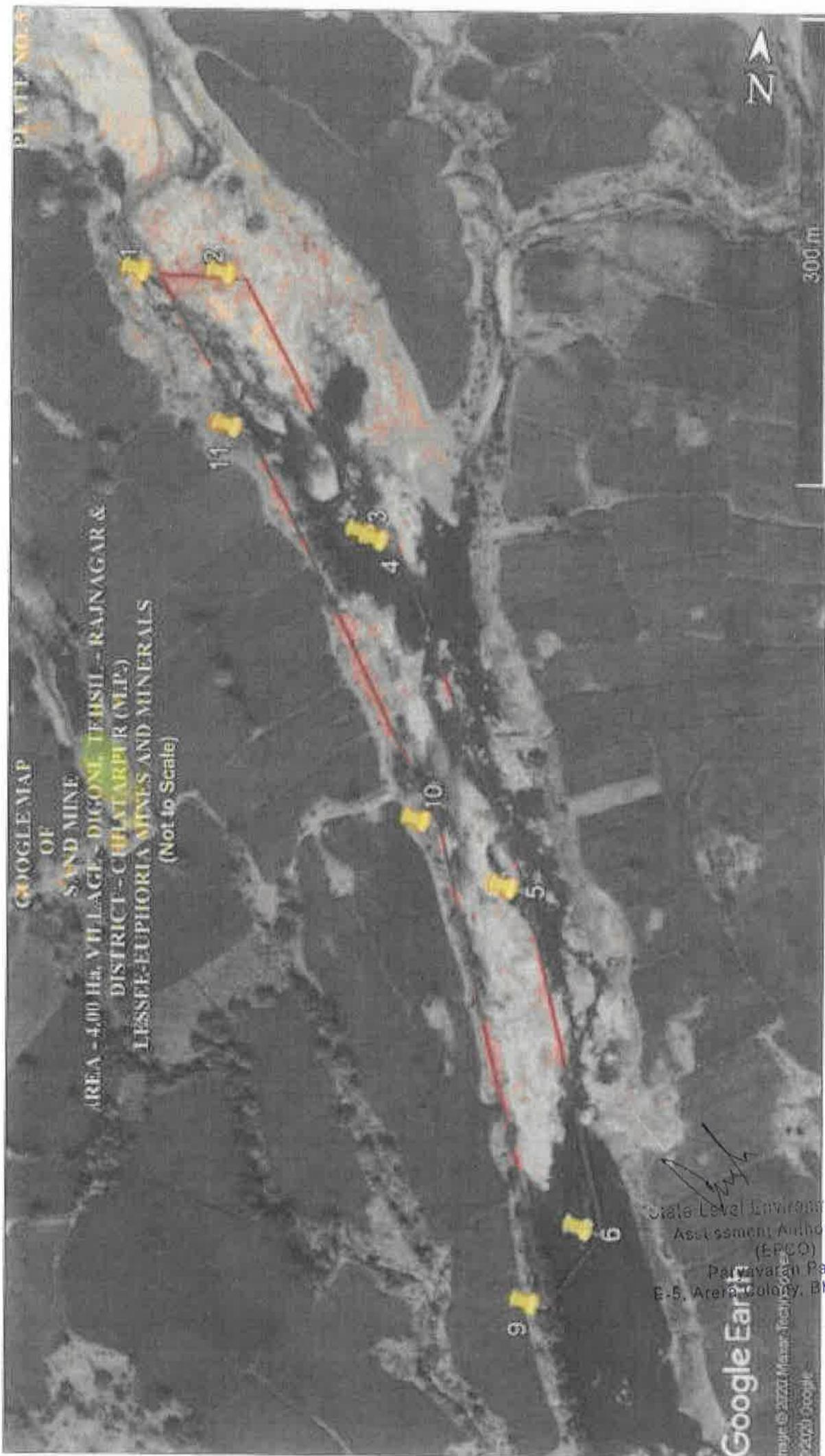
GOOGLE MAP  
OF

SAND MINE  
AREA: OHL VILLAGE - HIN  
VELSH - CHANDI & DISTRICT - CHH  
MANOUR (M.P.)  
LESSOR: DIPAKA MINES AND MINERALS  
(No Scale)

1/3/2019

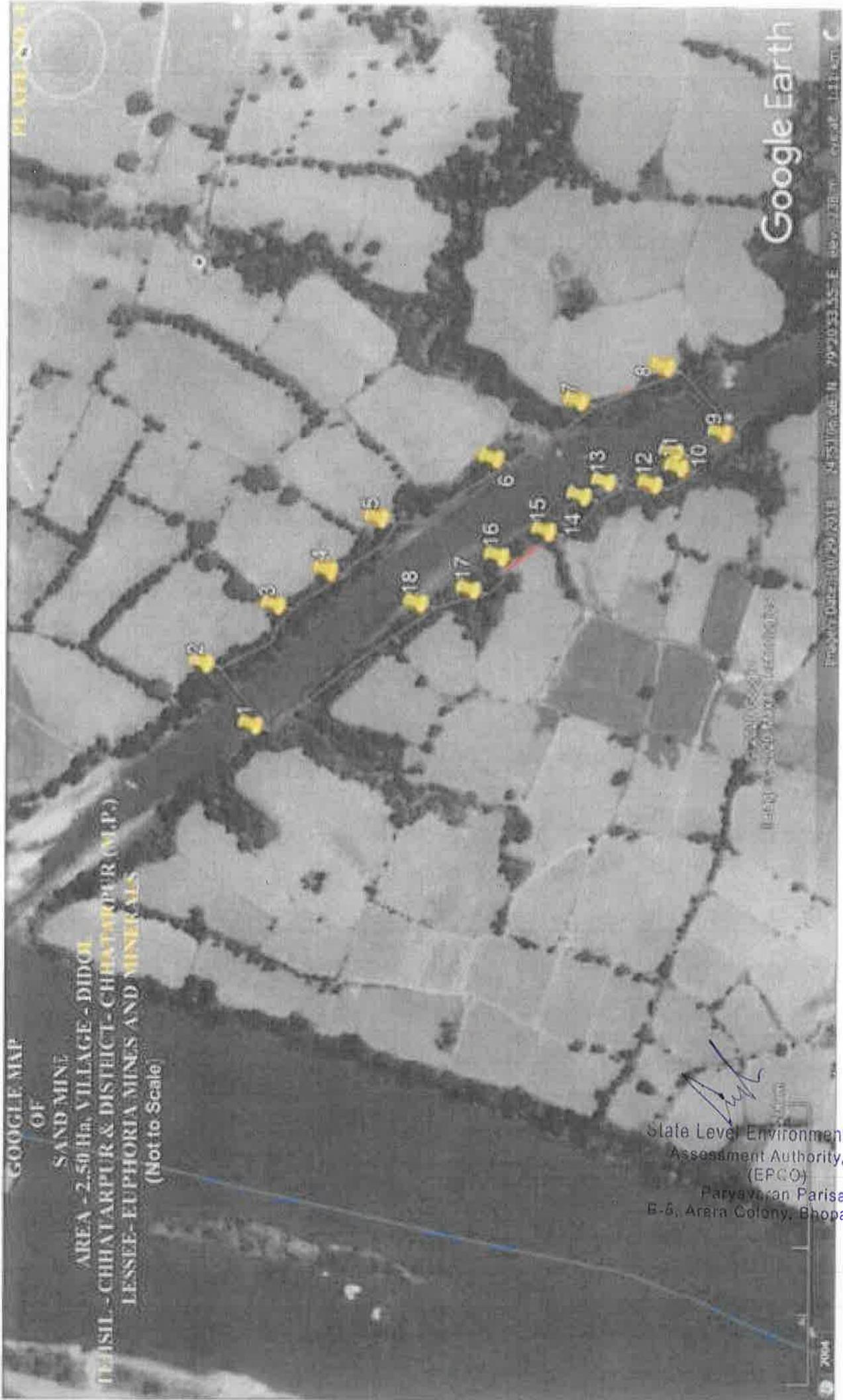






State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Aera Colony, Bhopal (M.P.)

Google Earth





GOOGLE EARTH

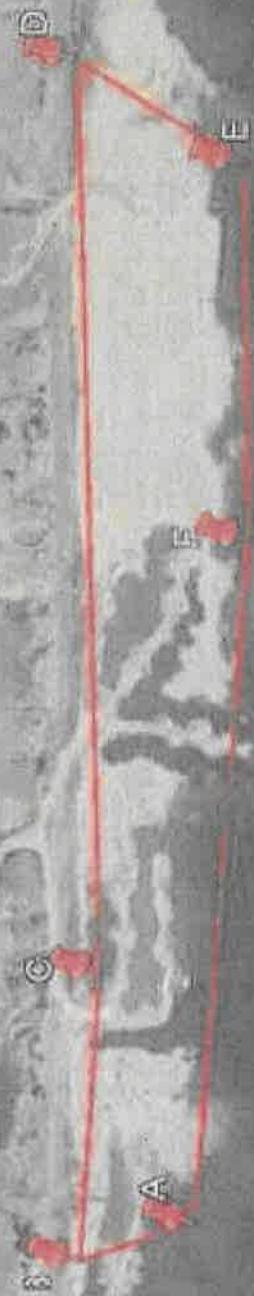
Google Earth

Imagery Date: 11-3-2013 24°59'37.04"N 80°32'25.21"E (day) 128 m

### GOOGLE MAP ON WATER AND MINE

ANNUAL REPORT OF THE VILLAGE OF ARERA  
CONSTRUCTION QUARTERLY REPORT  
ON WATER AND MINES AND WILDLIFE  
(Not to Scale)

WATER



State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)



PLATE NO.4

COCONUT  
OR

BAGHARIA SAND MINE  
AREA = 8.0 Ha. VILLAGE - BAGHARIA  
TEHSIL - CHANDLA & DISTRICT - CHHATARPUR  
LESSER EUPHORIA VINES AND MAXIMUS

(Not to Scale)



State Level Environment Impact  
Assessment Authority, MP.  
(EPCA)  
Parivartan Pariser  
E-5, Arera Colony, Bhopal - 462015

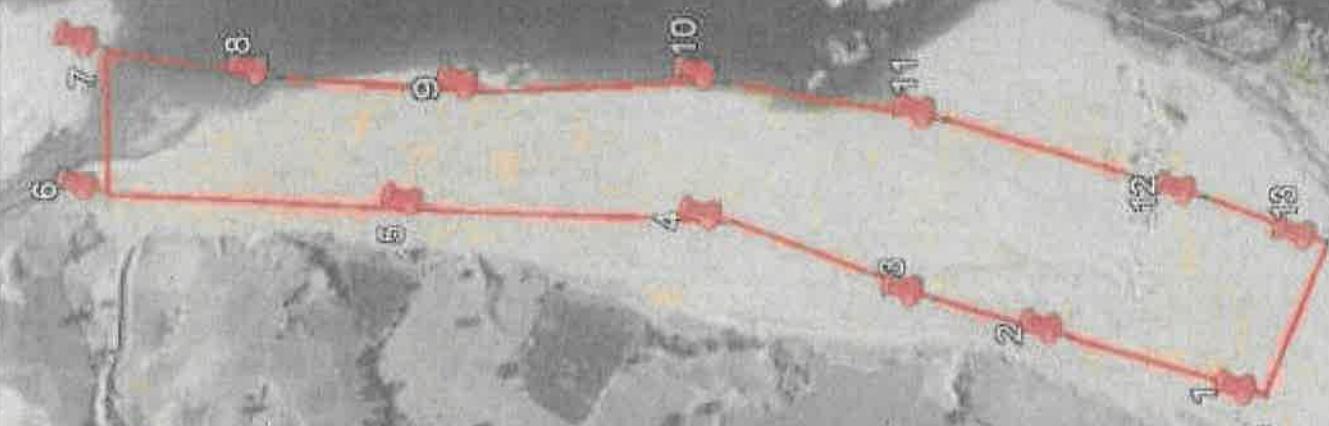
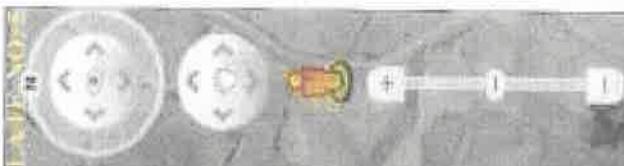
Image ID: 20400ENES / 40004

Google Earth

Imagery Date: 11/09/2015      25°01'26.35"N      80°16'01.44"E      Alt: 125 m      View all      1.16 Km O

2008

Google Earth



660021111111

CH

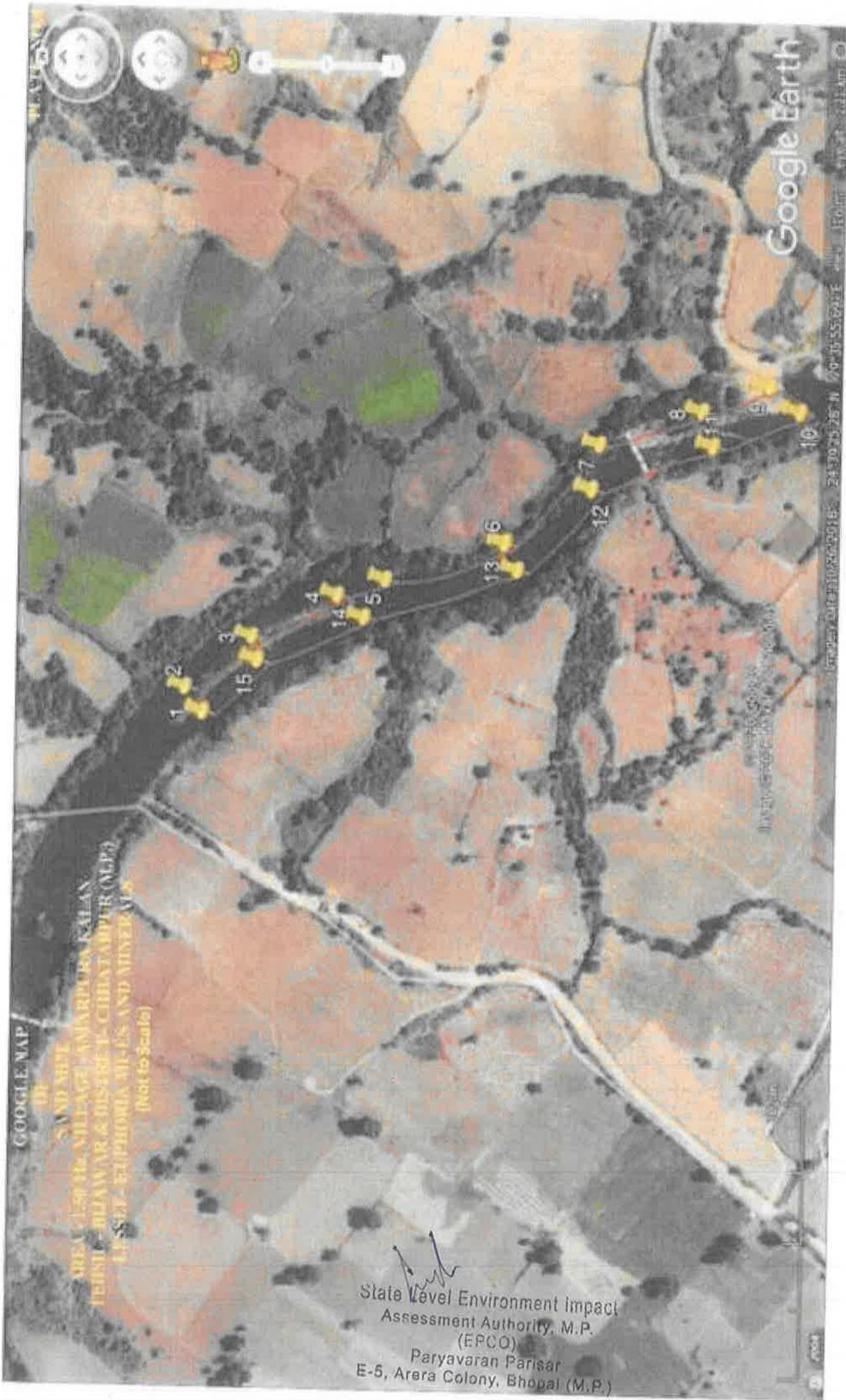
SAND MINE  
NO. 1 & NO. 46, THE GOLI CHHATRI  
TUMAR - CHHATRI & HISTORICAL MONUMENTS  
WASER, DUDHORHA MINING AND MINEFAC  
MOTTO, S.G.D.

India 6-2023 (LaserEchomap)

201

State Level Environment Impact  
Assessment Authority, M.P.  
(EPCC)  
Parivaran-Parivar  
E-5, Arera Colony, Bhopal (M.P.)

Vish





GOOGLE MAP OF SAND MINE  
CARA - 7.00 Ha. VILLAGE - ALIPURA, TEHSIL - NOWGAON,  
DISTRICT - CHHATARPUR (M.P.)  
LESSOR - EUPHORIA MINES AND MINERALS  
(No Scale)

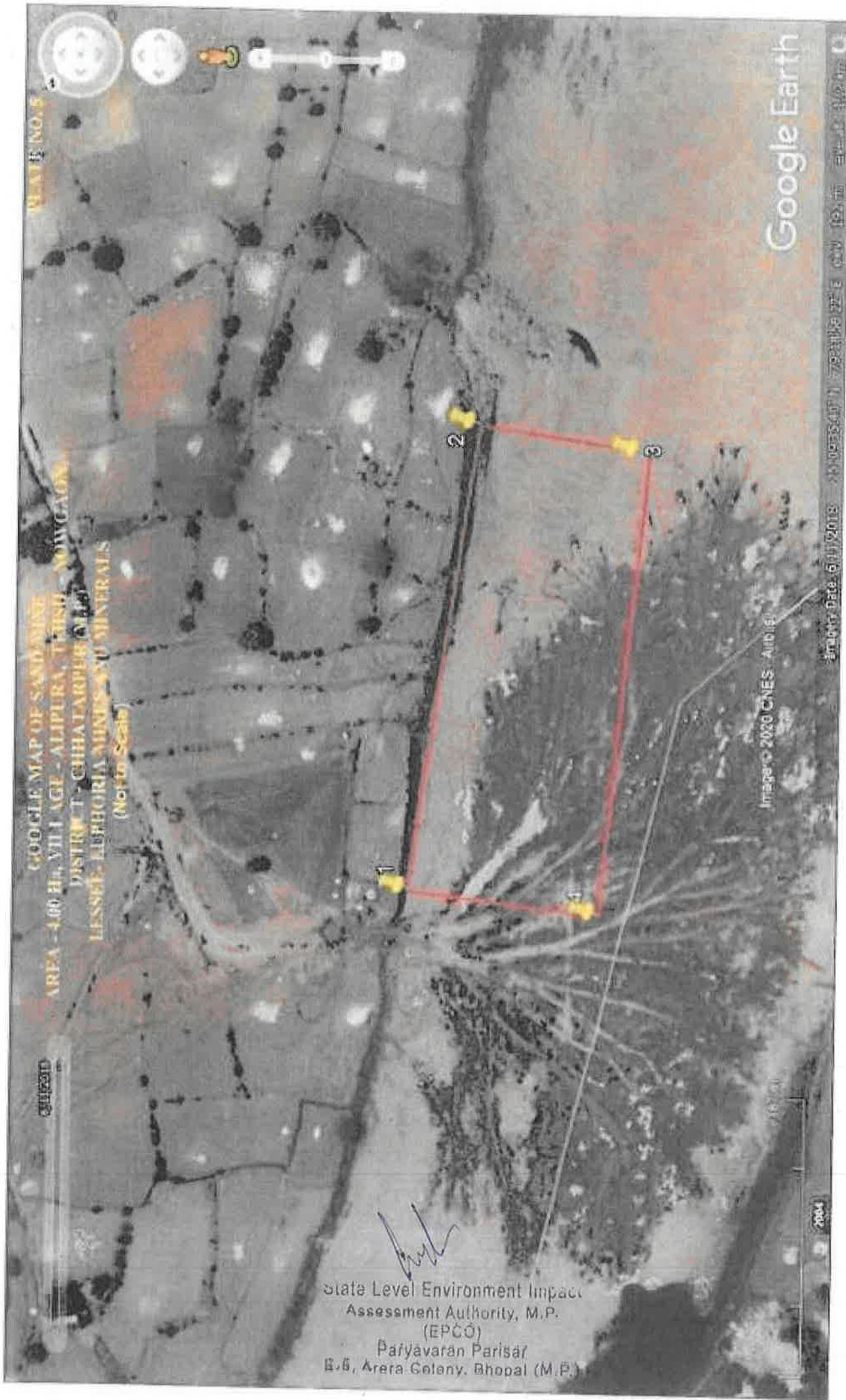
(Not to Scale)

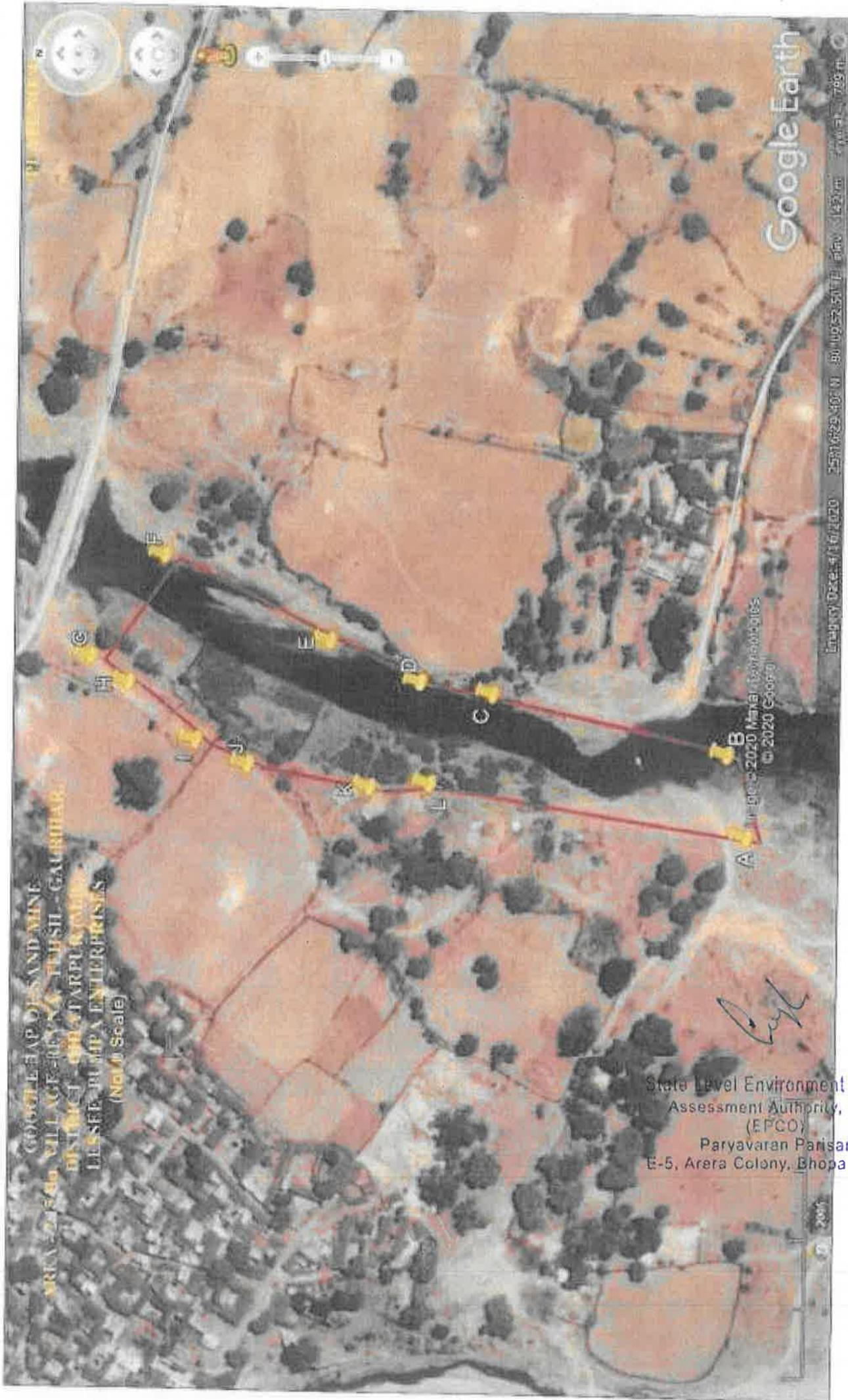
(Not to Scale)

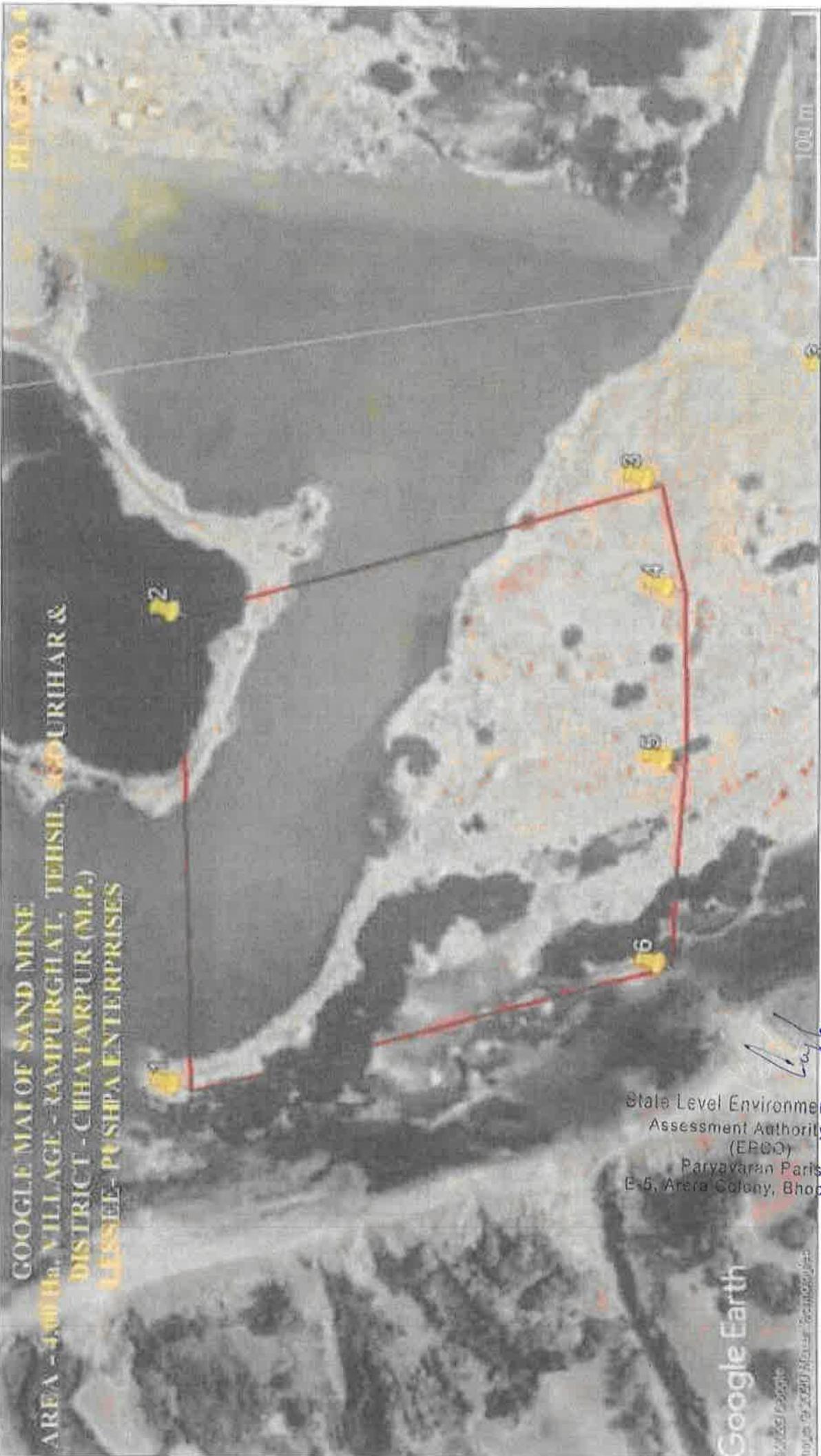
  
State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

Image © 2020 CNES / Airbus

Google Earth







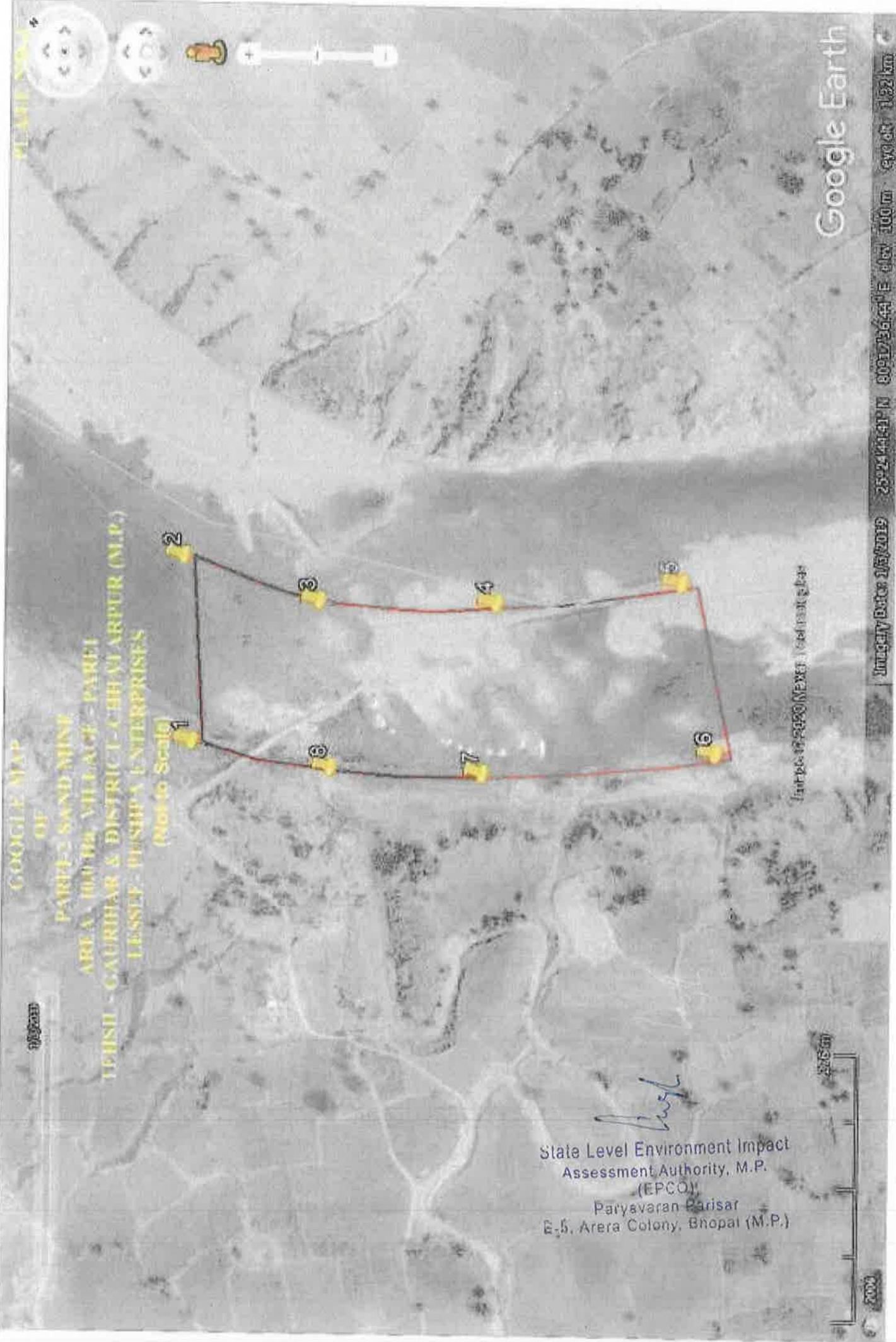




Latitude: 23° 08' 41.44'' N | Longitude: 78° 47' 00.00'' E

Last Update: 19/5/2018

Google Earth



COORDINATE OF POINTS  
SOUTH WESTERN POINT  
THE POINT WHICH IS NORTH OF THE  
LINES OF EARTHQUAKE



State Level Environment Impact  
Assessment Authority, M.P.  
(SLEIA)  
Paryavaran Parishar  
E-5, Arera Colony, Bhopal (M.P.)



Fig. 17.4. Map showing the areas

Google Earth

Longitude: 77°46'52.00"E Latitude: 23°27'56.50"N

200

Google Earth

Image © 2020 Maxar Technologies

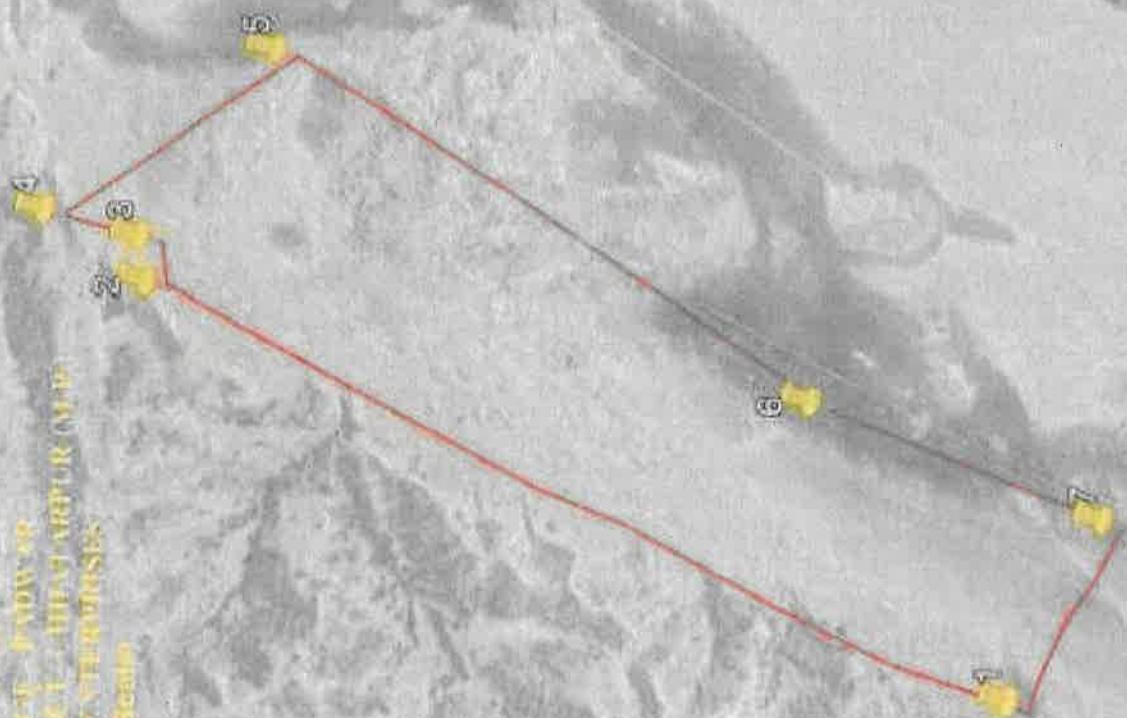
Image Date: 15/2/2019

Elev: 96 m

2326

State Level Environmental Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parivar  
E-5, Agra Colony, Bhopal (M.P.)

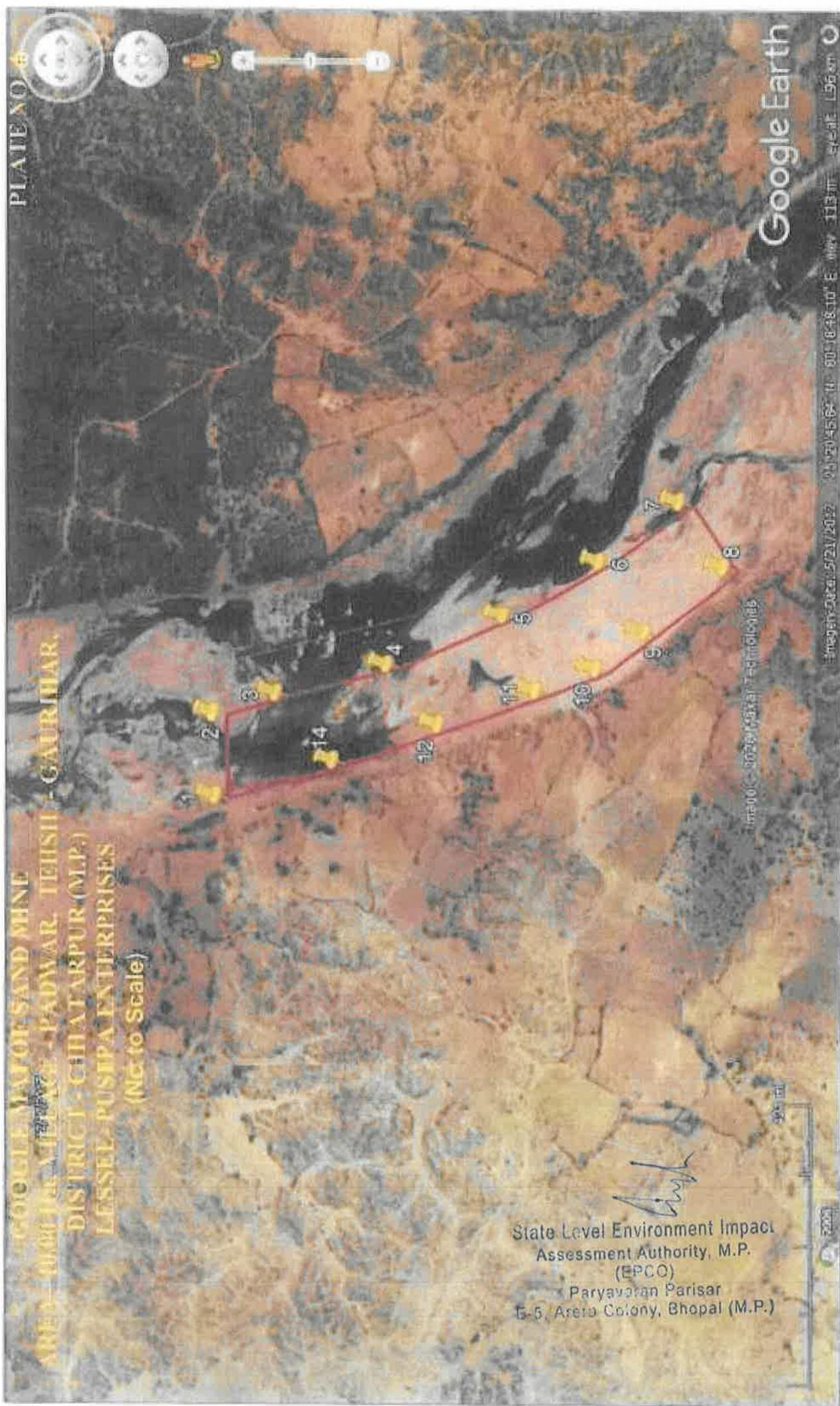
MAP OF  
VAPYAR SAWAD  
M.P. STATE GOVT. PWD &  
CIVIL ENGINEERING DISTRICT OFFICE  
MANOGAR TALUKA  
SCHOOL SCHEME

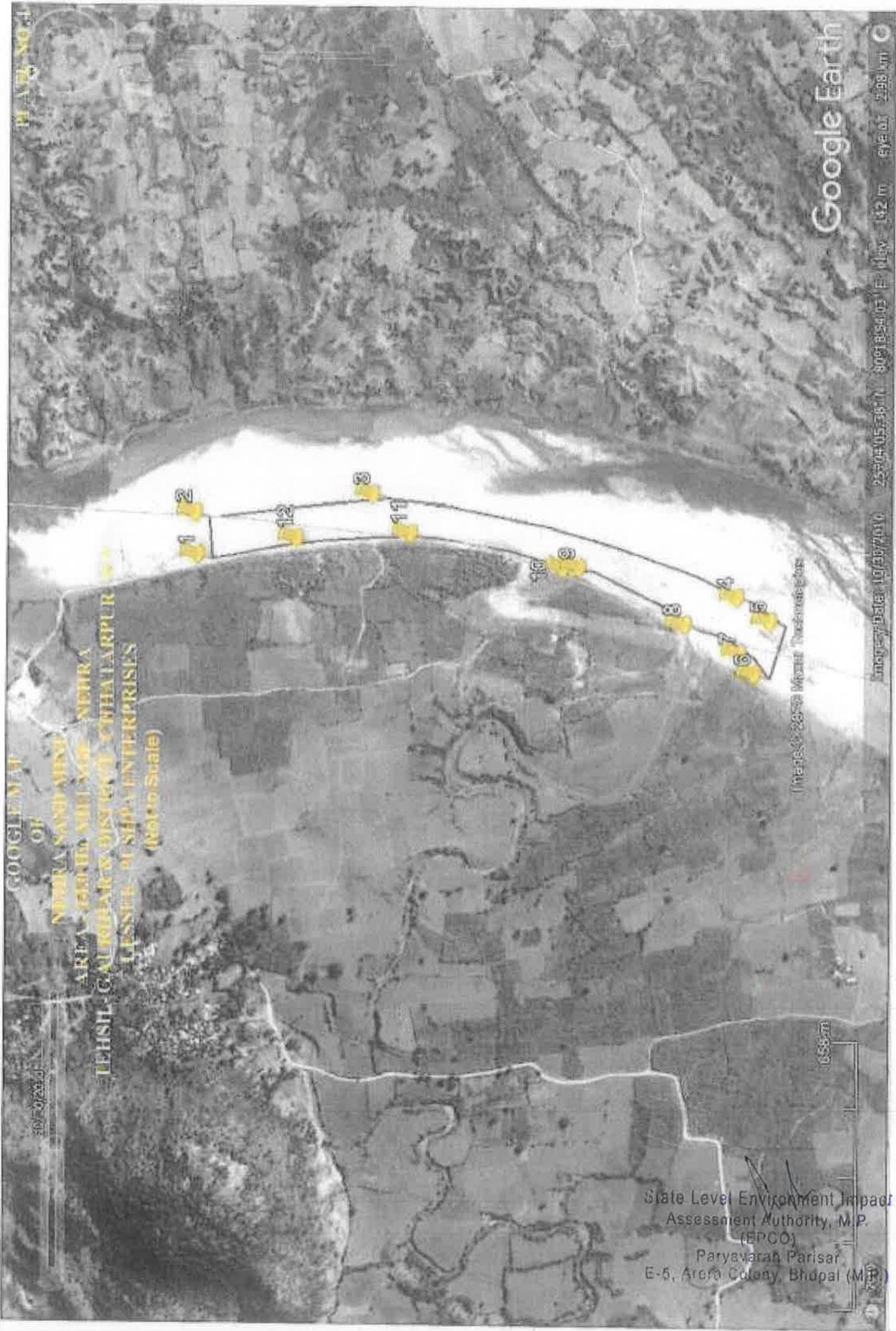


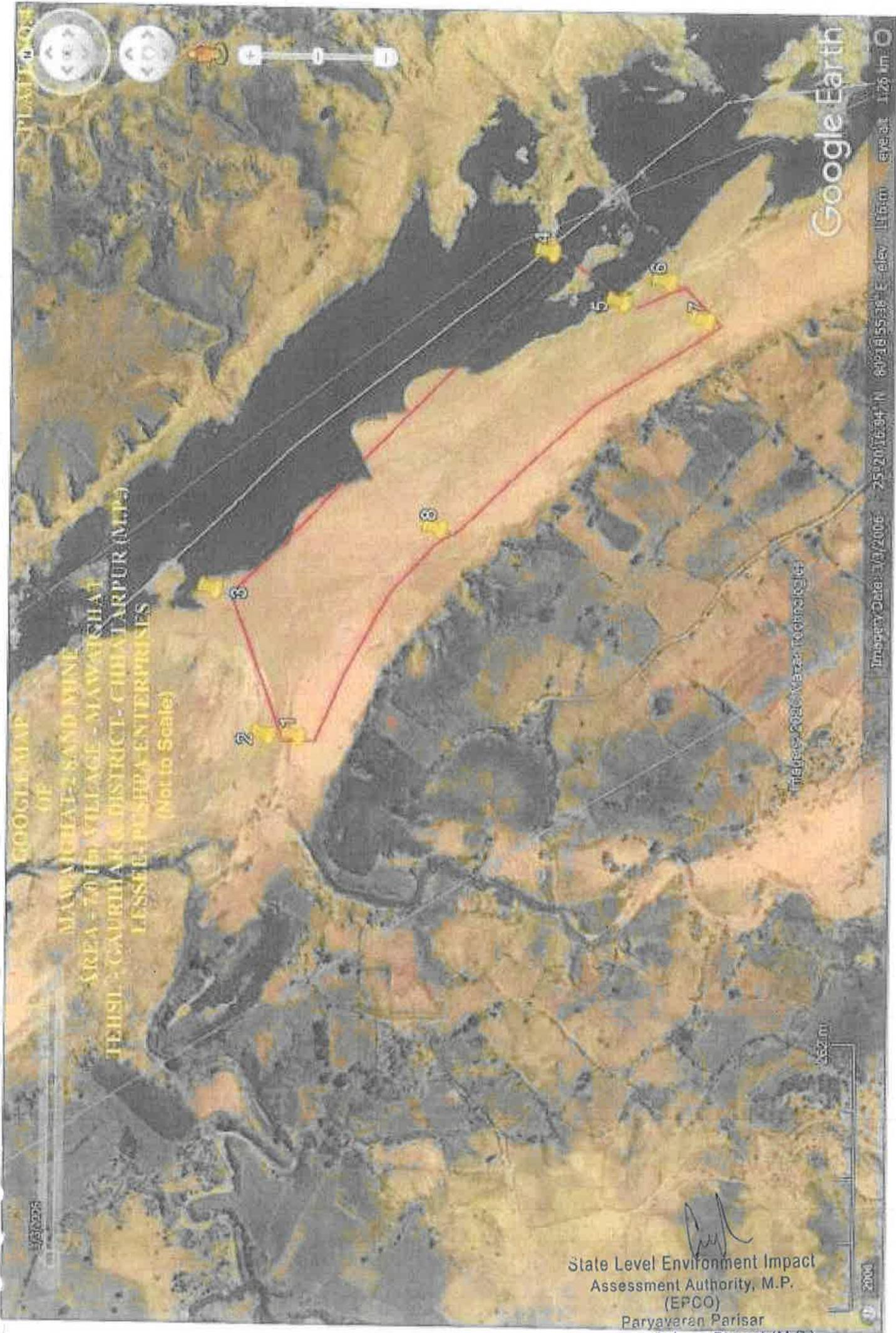
ROUTE MAP

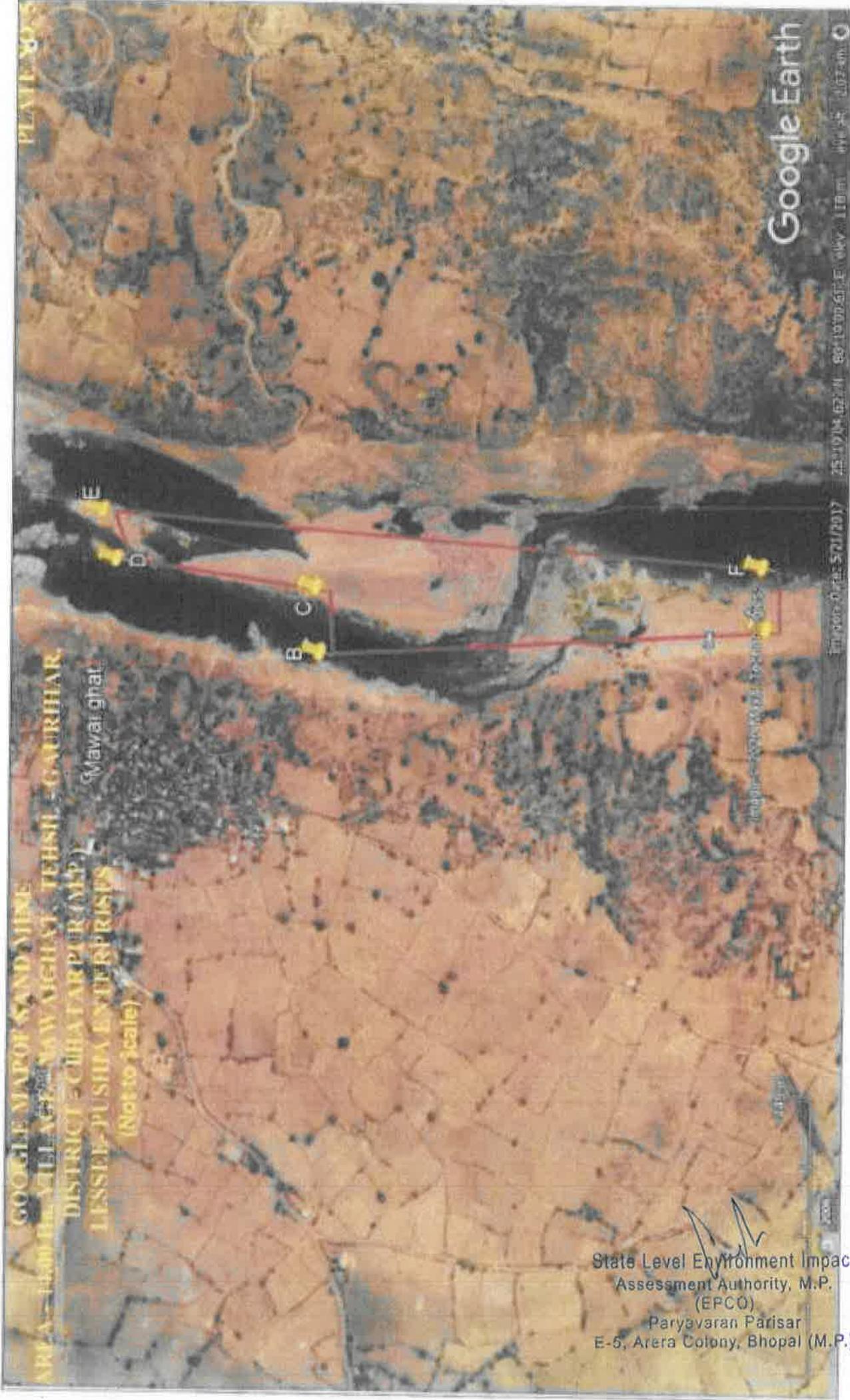
ROUTE





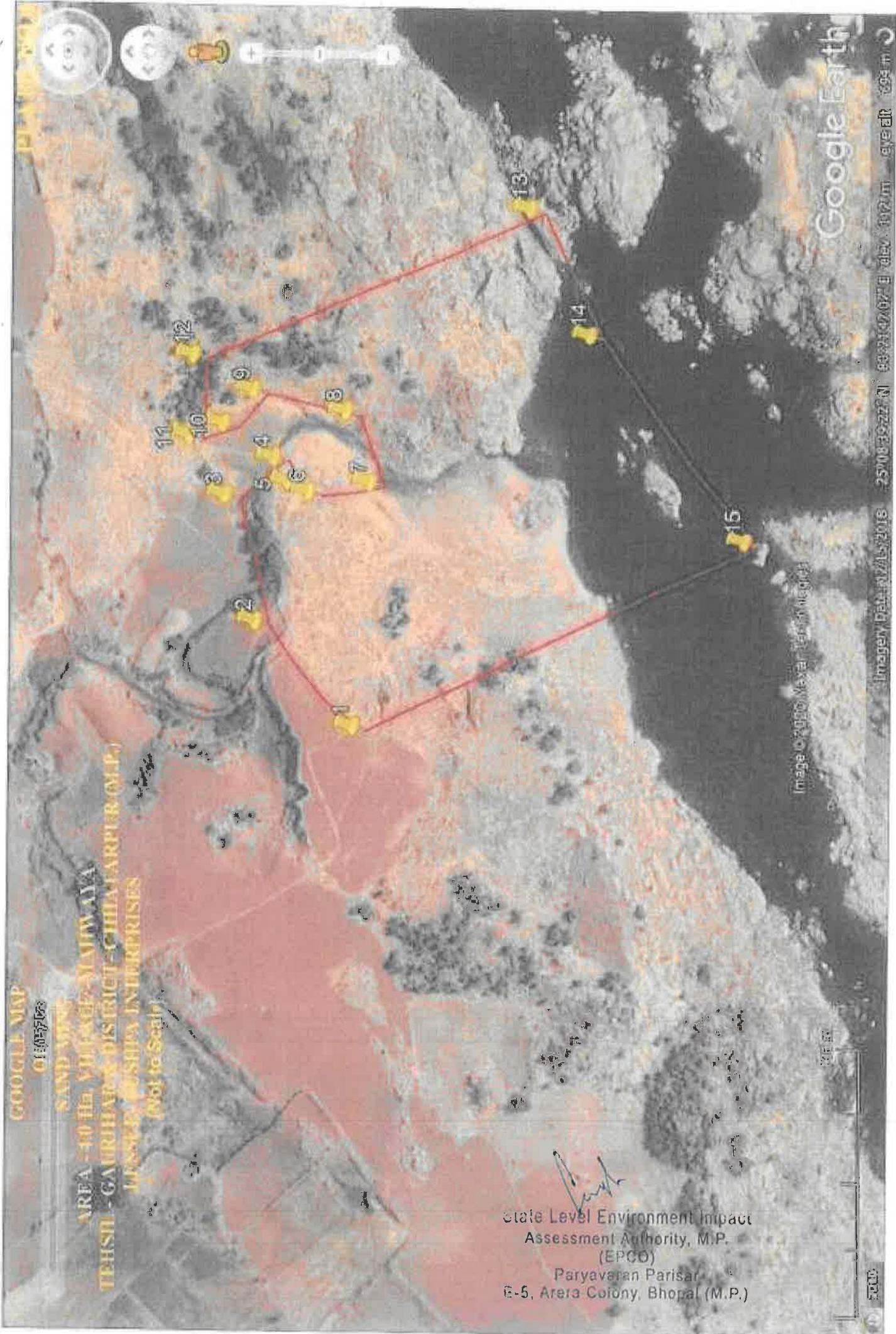






GOOGLE EARTH  
VIEW AT TEHSIL - GACHHRIAR  
DISTRICT - CHHATARPUR (M.P.)  
LESSER PLATEAU PLATEAU  
(Not to scale)

State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



### GOOGLE MAP

© Google

Survey Points  
Area = 10 Hectares  
TERSHI - GANTRY TRUCK CHAI KARPAROON  
Waste Management Enterprises  
*Not to Scale*

State Level Environment Impact  
Assessment Authority, M.P.  
(EPCO)  
Paryavaran Parishad  
E-5, Arera Colony, Bhopal (M.P.)

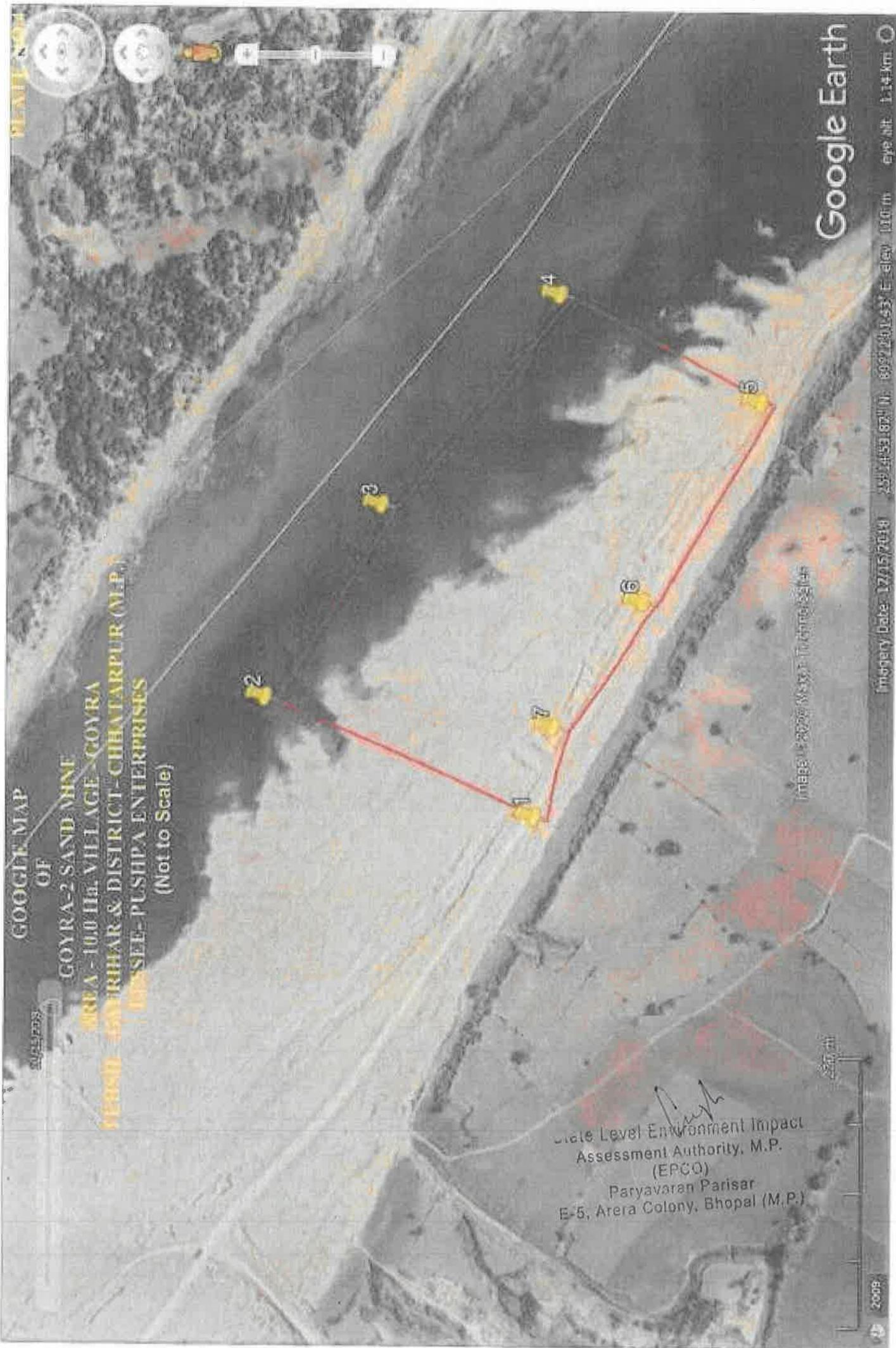
Image © 2020 Google. All Rights Reserved.

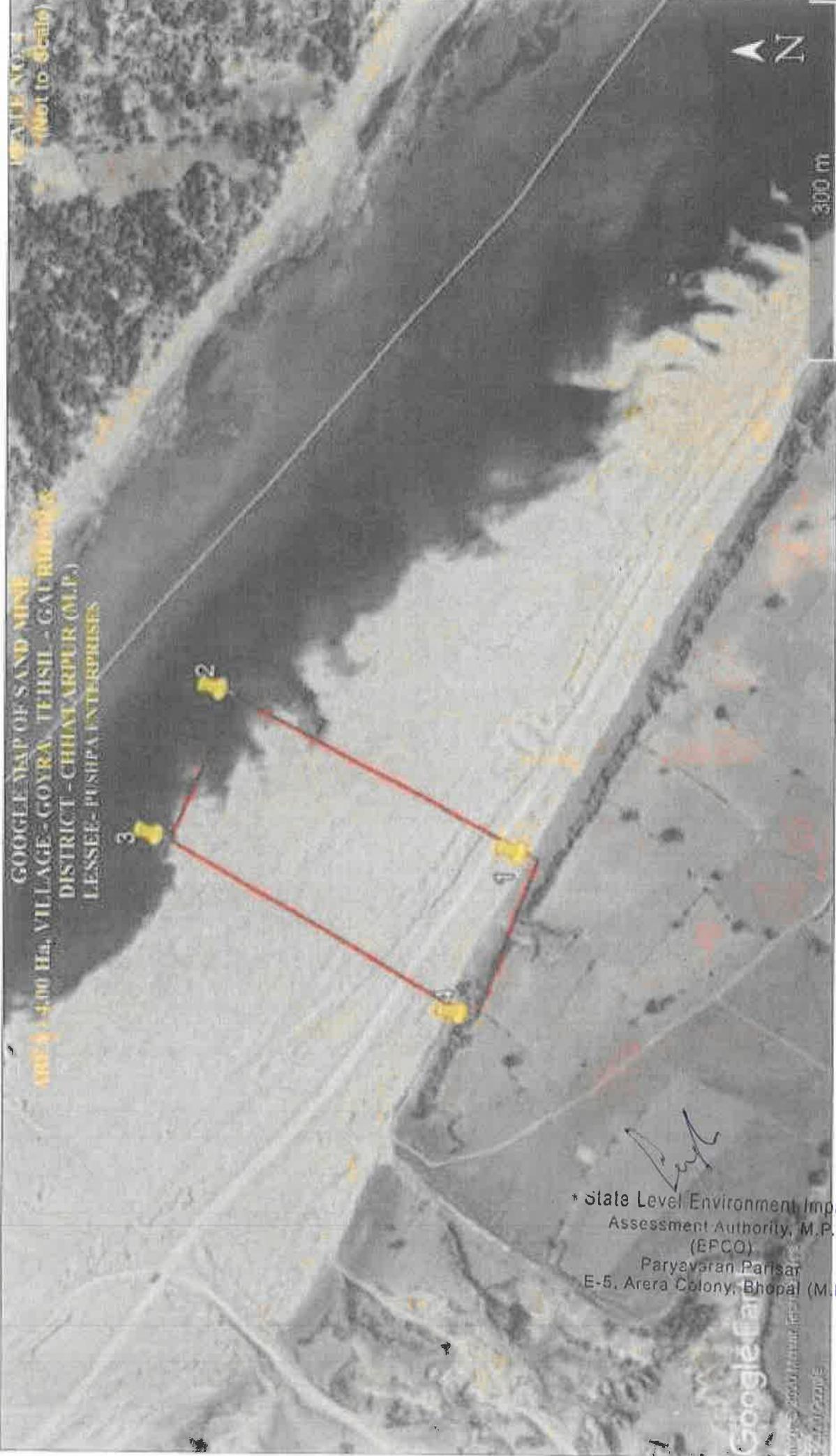


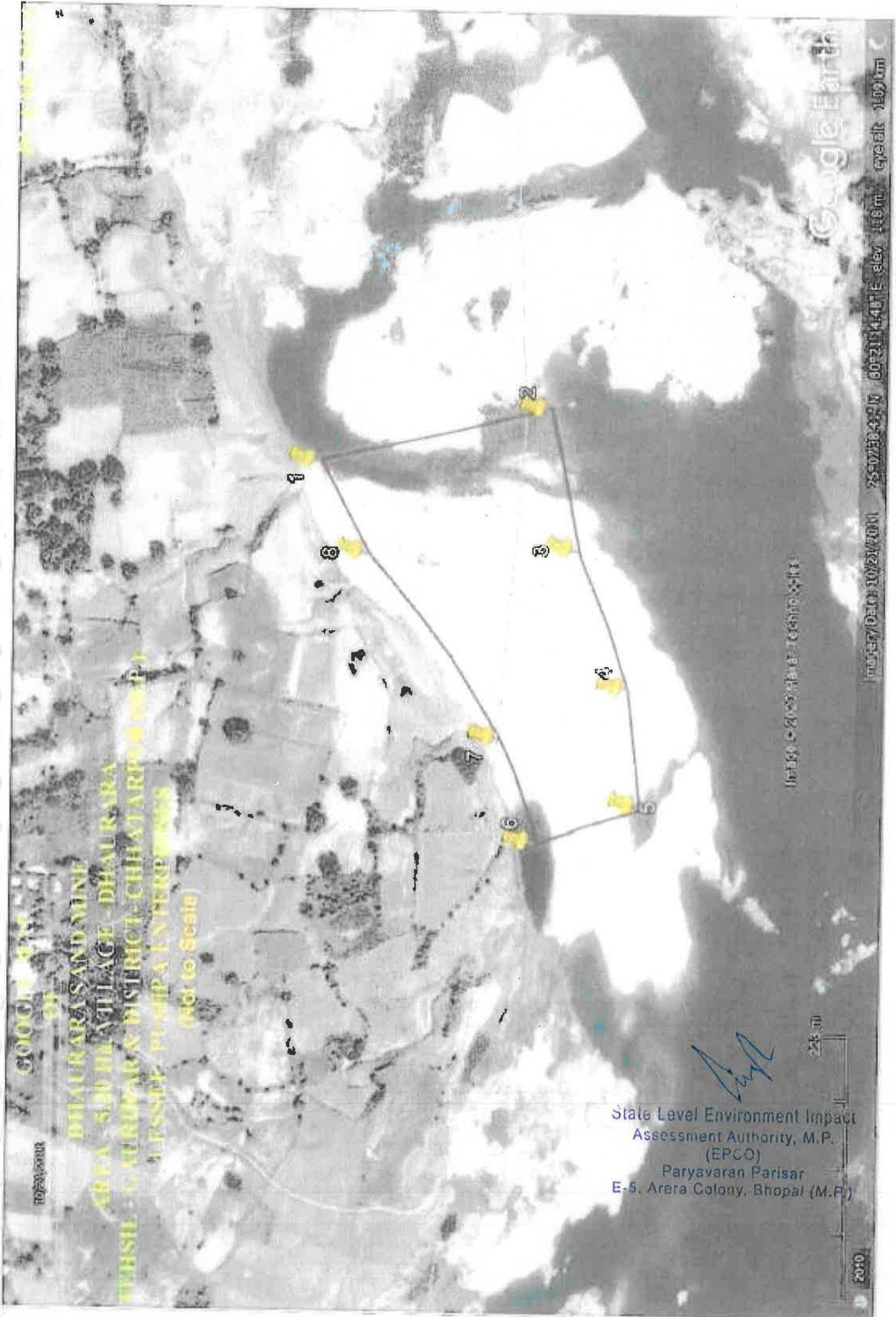
GOOGLE MAP POSITION  
APPROX - 150 HA VILLAGE LANDSCAPE SURVEY  
DISTRICT - CHHATARPUR  
STATE - PUNJAB, INDIA

State Level Environment Impact  
Assessment Authority, M.P.  
(SLEIA)  
Parivaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

Google Earth







**CHORAL MAP OF SAND MINE  
AREA - 2.00 Ha.  
A/C BARUAN JHUNJHUNWALA  
DISTRICT CHHATARPUR (M.P.)  
LESSER JHUNJHUNWALA ENTERPRISES  
(Not to Scale)**

PLATE NO. 4



**State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)  
Parivaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)**

Google Earth

Discovery Date: 07/23/2018

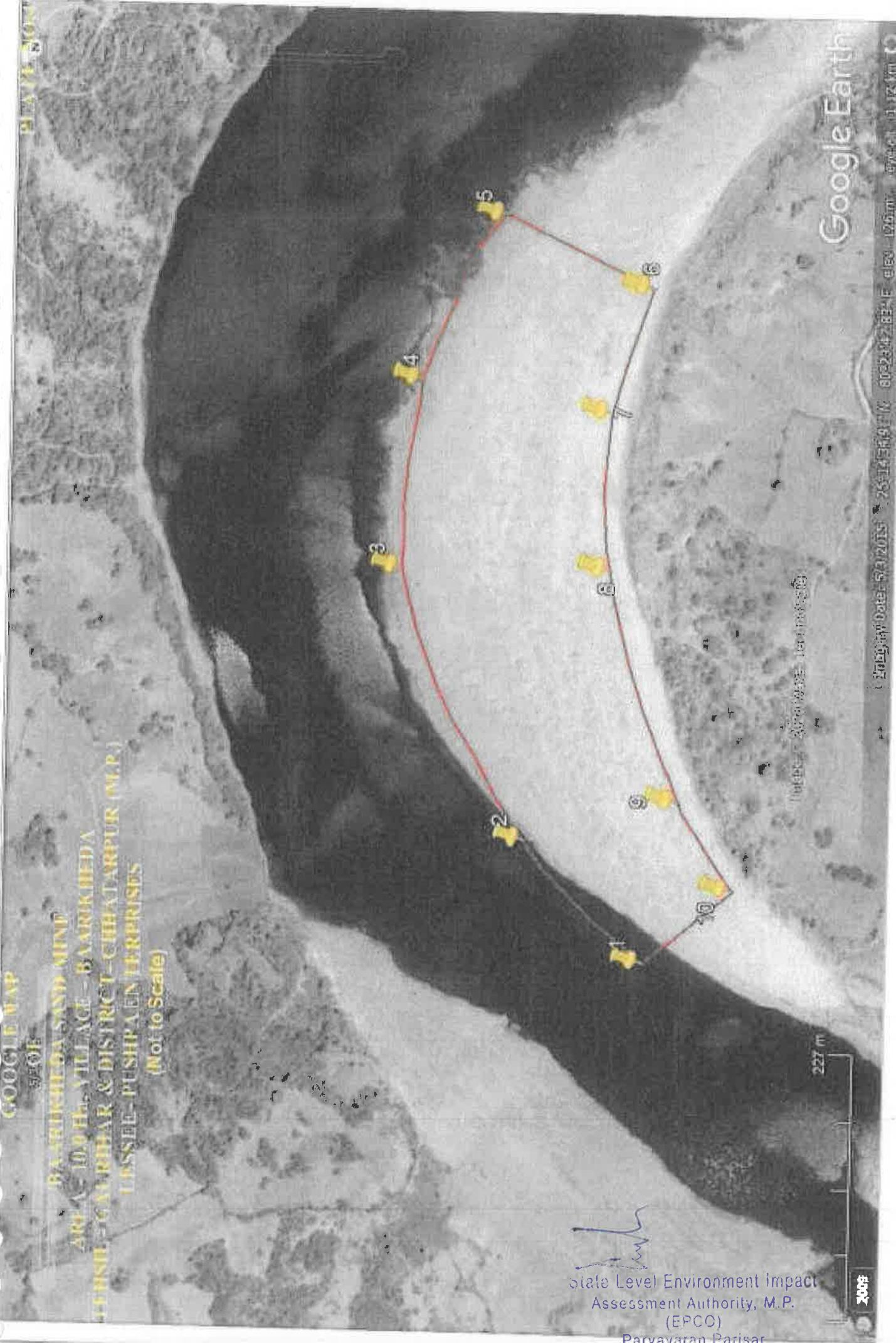
Latitude: 25°24'27.30" N  
Longitude: 80°18'23.16" E  
Altitude: 300 m  
Scale: 0.4 km

Google Earth

Image Date: 5/3/2015 - 25°14'56.91"N 60°24'22.82"E Elevation: 112 m

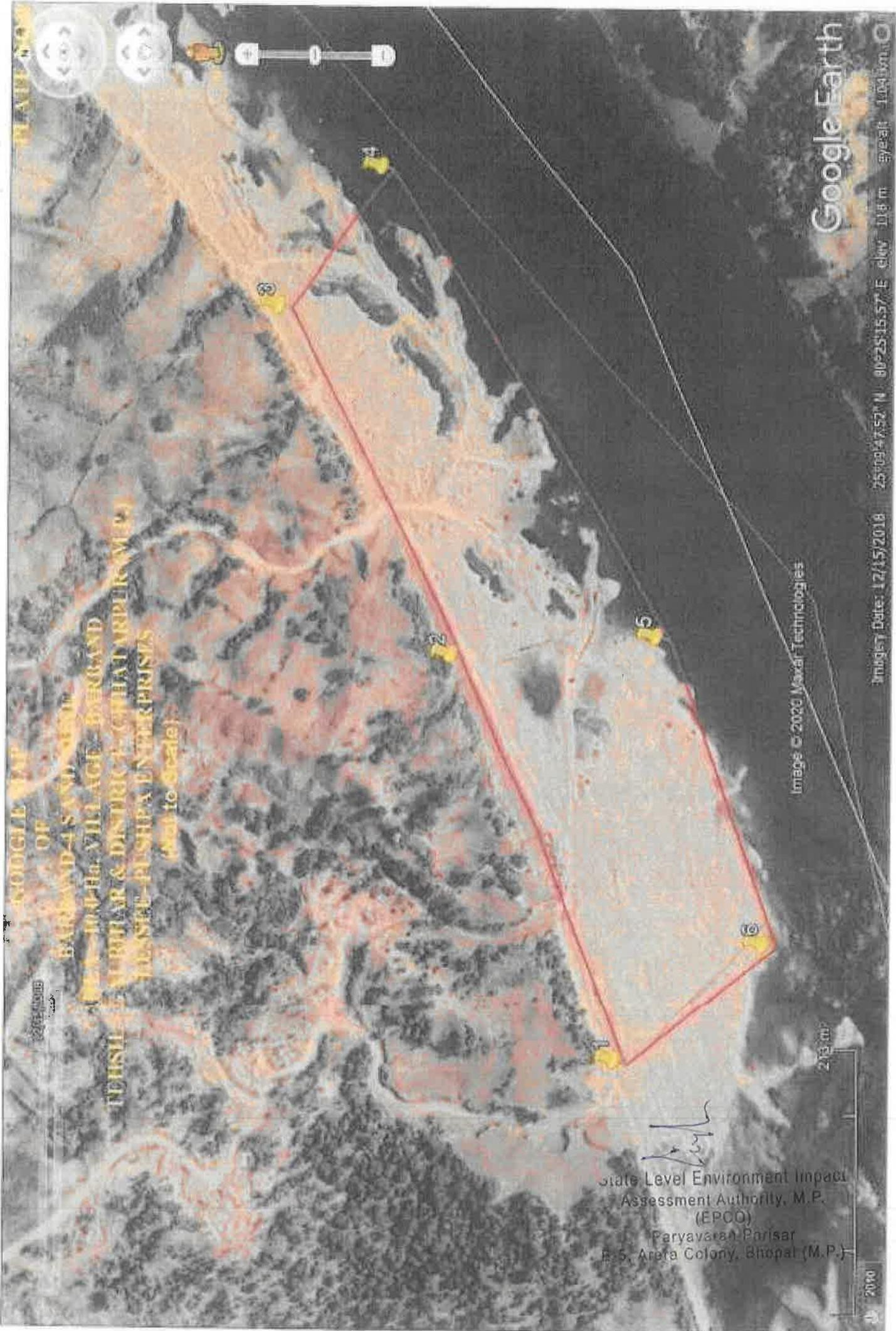
### ROUTE MAP

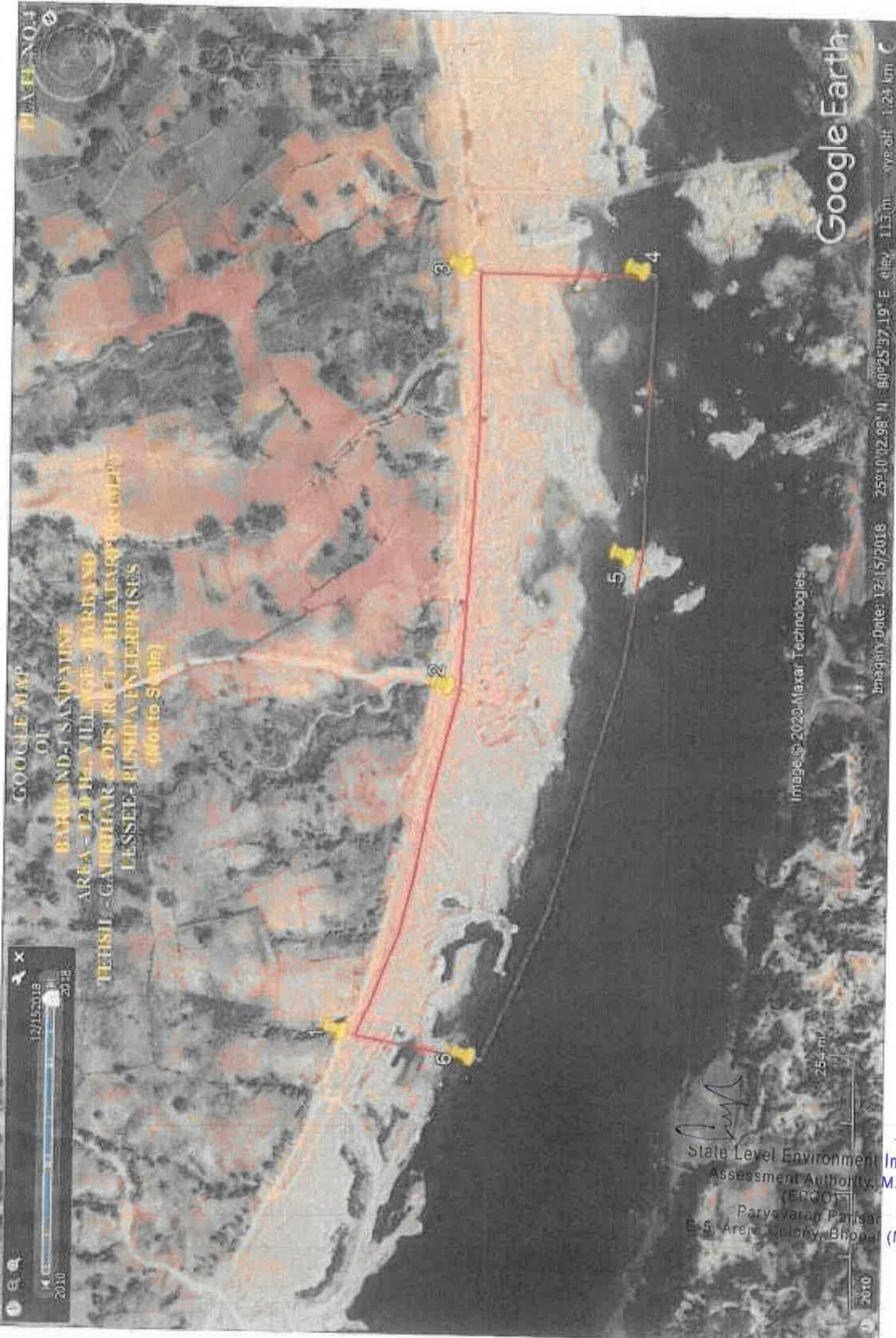
ROUTE MAP  
ROUTE NUMBER: 1  
ROUTE NAME: DANTOOLI - DANTOOLI  
ROUTE DISTRICT: CHHATARPUR (M.P.)  
ROUTE PUSHPAEN RELEASES  
(Not to Scale)



State Level Environment Impact  
Assessment Authority, M.P.  
(EPCA)

Paryavaran Parivar  
E-5, Arera Colony, Bhopal (M.P.)

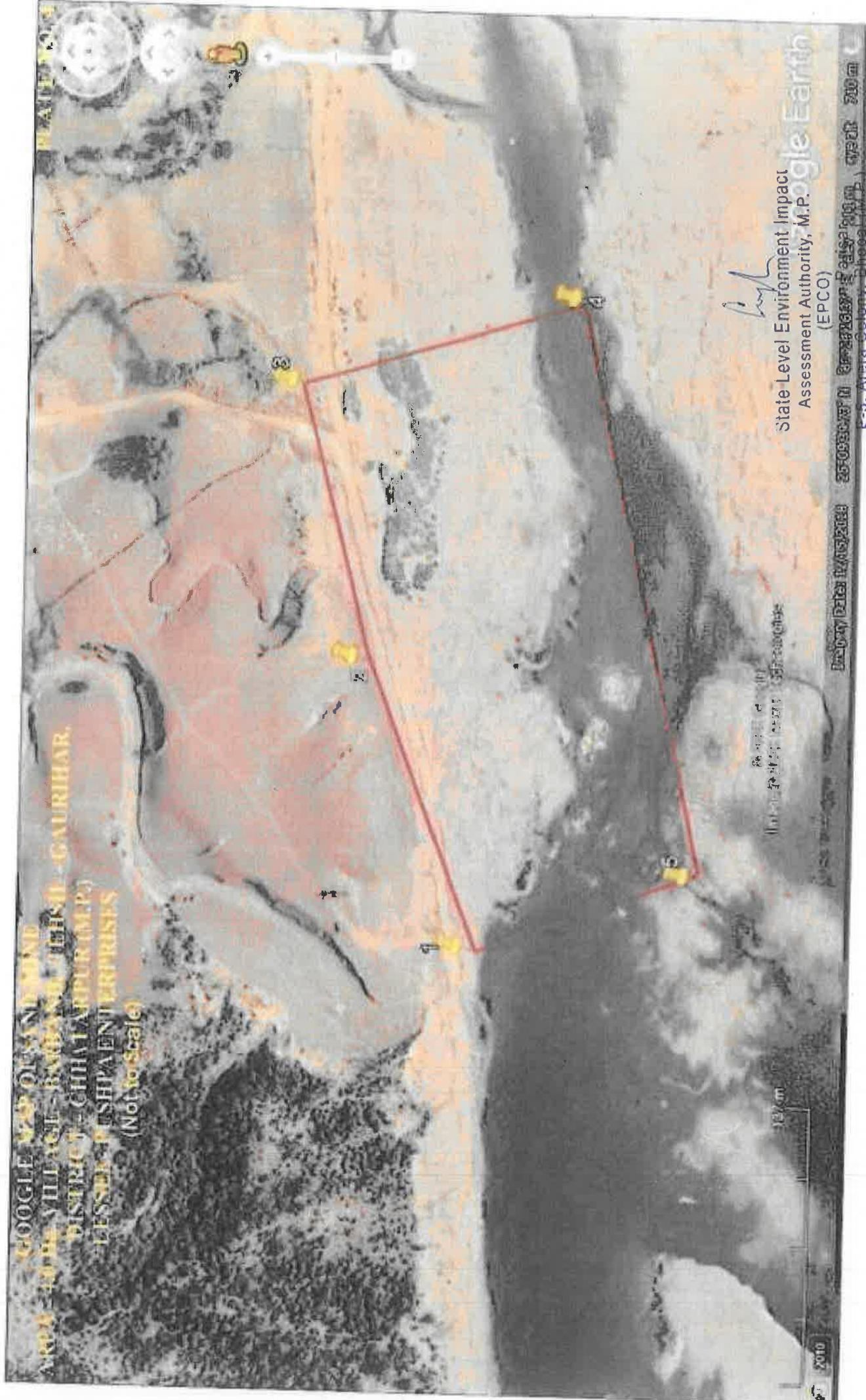


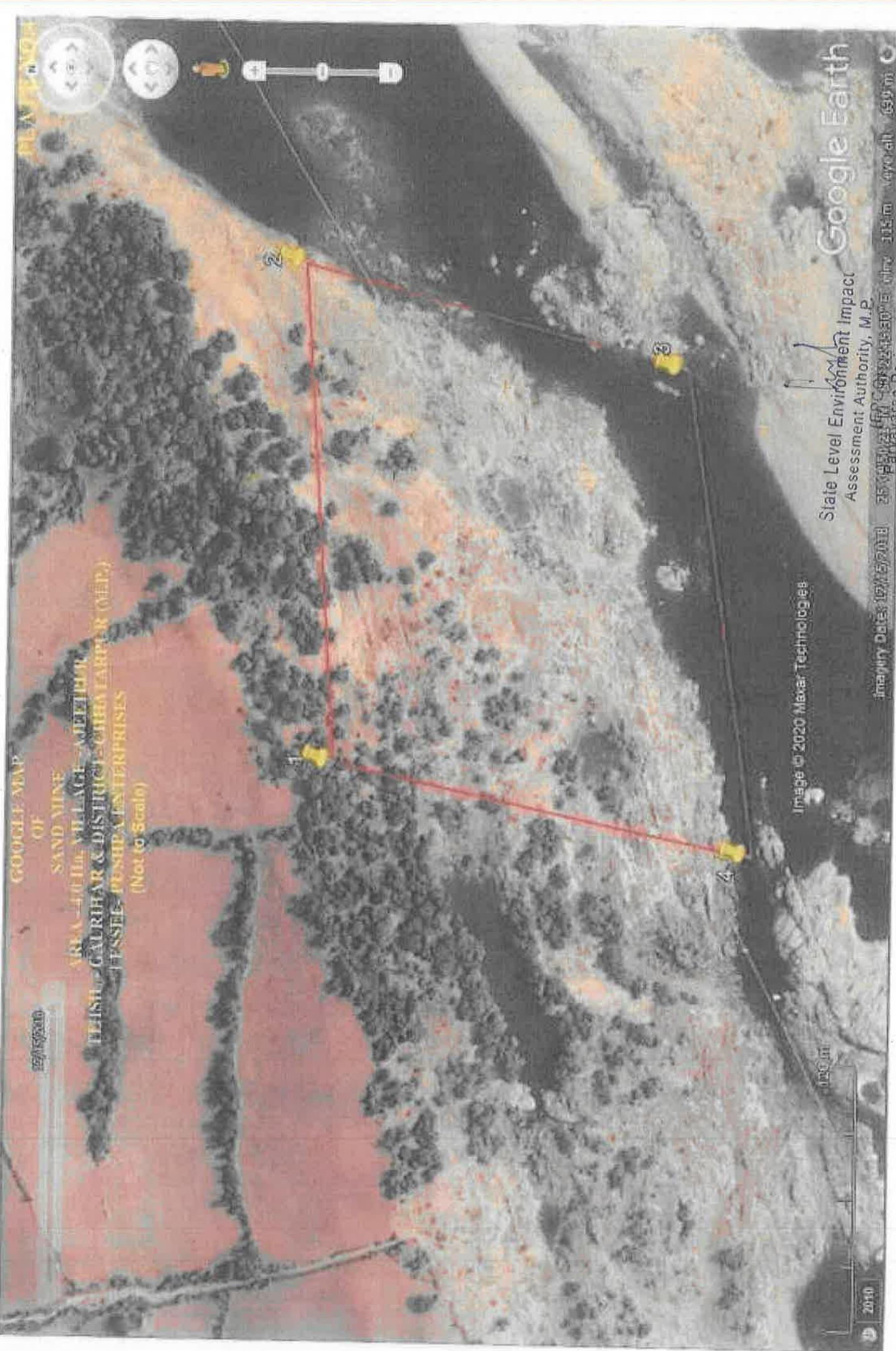


Google Earth

Image © 2020 Maxar Technologies

2010





Google Earth

State Level Environment Impact  
Assessment Authority, M.P.

Imagery Date: 17/5/2018

020.00

2010

E-5, Arera Colony, Bhopal (M.P.)

Google Earth

GOOGLE MAP

FIGA NO. 2 AND NO. MINING  
COP. V. 1/2000 SHEET NO. 1 BARBAND  
TEHSIL GAWRIKHA & DISTRICT CHHATARPUR (M.P.)  
LICENCE OF STATE ENTERPRISES  
(Not to Scale)

102470005

State Level Environment Impact  
Assessment Authority, M.P.  
(EPCO)  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)

Latitude: 25.046731 N Longitude: 80.255264 E

Elevation: 111 m

Scale: 1:21 km

Image: 2010/03/10 25.046731, 80.255264 111m eye alt: 1.21km

जिला छतरपुर – खोदू-भरु खदानों का व्यौरा								
समूह का नाम – समूह क्रमांक-1 (तहसील का नाम – गौरिहार)								
क्र	जिला	तहसील का नाम	ग्राम	खसरा नं०	अनुमानित रकवा है०	रेत का अनुमानित भण्डार (घ.मी.)	रिमार्क	
1	2	3	4	5	6	7	8	
1	छतरपुर	गौरिहार	मवईधाट	73/3/1/2, 48/9/2	1.000	12,000	मवईधाट	
2	छतरपुर	गौरिहार	फततेपुर	295/3/1, 295/3/2	1.330	12,000	फततेपुर	
3	छतरपुर	गौरिहार	सिंगारपुर	148/5/ख	1.000	12,000	सिंगारपुर-1	
4	छतरपुर	गौरिहार	सिंगारपुर	64/5	1.000	12,000	सिंगारपुर-2	
5	छतरपुर	गौरिहार	अजीतपुर	488/4/17	1.000	12,000	अजीतपुर	
6	छतरपुर	गौरिहार	बारबंद	253/1/2/1	1.000	12,000	बारबंद	
				कुल	6.330	72,000		

  
 State Level Environment Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parisar  
 E-5, Arera Colony, Bhopal (M.P.)